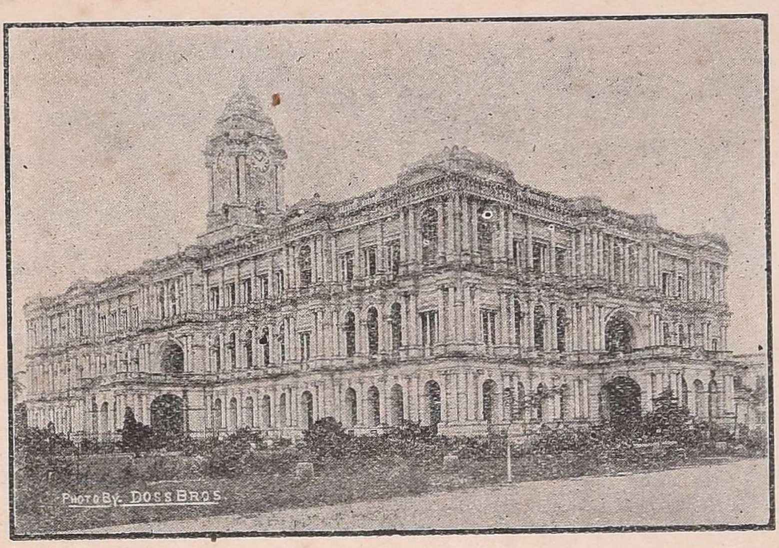
CORPORATION OF MADRAS



(RIPON BUILDINGS)

ANNUAL REPORT

OF THE

Health Officer

of the City of Madras

FOR THE YEAR

1920.

MADRAS:
PRINTED BY S. MURTHY & CO.,
AT THE "KAPALEE" PRESS,
305, THAMBU CHETTY STREET.
1921

ADDENDA ET CORRIGENDA.

Page 28 line 21 *for* "90" *read* "92"

„ „ „ 22 *for* "61" *read* "57" and *for* "114" *read* "110"

„ „ „ 26 *for* "151" *read* "149."

„ „ „ 27 *for* "Ninety" *read* "Ninety two"

„ „ „ 28 *for* "61" *read* "57"

„ 30 „ 30 *for* "1919" *read* "1918"

„ 42 against Total deaths registered in 1920 *for* "21197" *read* "27187"

„ 44 line 20 *for* "78 or 96" *read* "77 to 95"

„ „ „ 24 *for* "108" *read* "107"

„ „ „ 29 *for* "mfro" *read* "from"

„ 78 „ 5 below the statement *for* the figure "231·1" *read* "231·4"

„ 78 „ 6 do *for* do "280·4" *read* "329·0" and *for* '1920" *read* "1919"

„ 79 „ 18 *for* "Ministery" *read* "Ministry"

„ 81 „ 7 *for* "14" *read* '90"

„ 84 „ 2 *for* "16" *read* "92"

„ 85 „ 2 *for* the figure "1919 355·5" *read* "1918 355·2"

„ „ „ 3 *for* the figure "1920 280·4" *read* "1919 329·0"

„ „ „ 3 *for* the figure "256·7" *substitute* "not available owing to redistribution of the city into new Municipal Divisions."

„ „ „ 3 *for* the figure "231·1" *read* "231·4"

„ 93 under the heading Infantile mortality in the City of Madras, *for* '1919' *read* '1918' *for* '1920' *read* '1919' *for* '355·5' *read* '355·2' *for* '280·4' *read* '329·0.'

„ „ under the heading Working area of C. W. scheme *for* '256·6' *read* "Not available owing to redistribution of the City into new Municipal Divisions."

„ under the heading For Infants in the care of C. W. S. *for* "231·1" *read* "231·4"

„ 133 „ Table C, under Infantile Death-rates under 1920 against European *for* "1" *read* "116·3"

„ 135 „ in column 4 of the heading *for* '1921' *read* '1920' against Total, *for* '2793' *read* '279·3'

CONTENTS.

	Pages.
Introduction	1—7
Sanitation	8—26
Conservancy (general)	26—29
Disposal of Rubbish	30—34
Night conservancy system	34—37
Vaccination	38—41
Vital Statistics	42—47
Reports from Hospitals and Dispensaries under the control of the Health Department	47—53
Reports of the several institutions and organizations interested in public health and welfare	54—57
Report of the Special Malaria Department	58—62
Child Welfare Scheme—	
Health Officer's note	63—69
Report of the Lady Superintendent, Child Welfare Scheme ...	71—95
Statistical Returns	97—140

CORPORATION OF MADRAS,

Health Department,

Madras, 11th August 1921.

From

Dr. C. SINGARAVELU MUDALIAR, L.R.C.P. & S., (Edin.),
L.F.P. & S., (Glas.)
Officiating Health Officer, Corporation of Madras.

To

THE COMMISSIONER,
Corporation of Madras,
MADRAS.

SIR,

I have the honour to submit herewith the Health Officer's annual administration report for the year 1920, prepared on descriptive and critical lines of the facts, figures and results recorded in the report, in accordance with G. O. No. 210 M., dated 5th February 1913.

I have the honour to be,
Sir,
Your most obedient servant,
C. SINGARAVELU,
Officiating Health Officer.

CORPORATION OF MADRAS,

Health Department,

Madras, 11th August 1921.

From

Dr. C. SINGARAVELU MUDALIAR, L.R.C.P. & S., (Edin.),
L.F.P. & S., (Glas.)
Officiating Health Officer, Corporation of Madras.

To

THE COMMISSIONER,
Corporation of Madras,
MADRAS.

SIR,

I have the honour to submit herewith the Health Officer's annual administration report for the year 1920, prepared on descriptive and critical lines of the facts, figures and results recorded in the report, in accordance with G. O. No. 210 M., dated 5th February 1913.

I have the honour to be,
Sir,
Your most obedient servant,
C. SINGARAVELU,
Officiating Health Officer.

INTRODUCTION.

The use of the Municipal Health Department consists in successfully fighting against disease and resisting death, so that misery may be mitigated and life rendered enjoyable. The main test of the use of the Health Department is the death-rate–the barometer of public health. No death-rate can be obtained without a proper knowledge of the population of towns. A census is therefore necessary and is taken every ten years. A census being taken, it devolves on the Health Department to maintain thence a correct registration of births and deaths, with a special mention of note-worthy causes, so that the census, coupled with such registration of births and deaths, may throw enough light on mortality returns. It is therefore primarily important that registration, one of the functions of the Health Department, should be controlled with a view to ensure accuracy. Otherwise the conclusions drawn will be erroneous and will serve no useful purpose. Though it is easy to record the actual number of deaths, great difficulties are still met with in obtaining accurate particulars of registration. There should be, therefore, a rule to the effect that no burial or cremation shall be allowed without a certificate of the cause of death from a recognised or registered medical practitioner or from a sanitary official of the status of Medical Registrar or Sanitary Inspector of the district. Such a measure is bound to lead to correct registration of deaths.

Accurate registration of birth is being brought under control by the appointment of lady health visitors and midwives, in addition to the already existing Corporation Conicapillays, whose duty it is to trace out births.

In the interests of correct registration of births, the Corporation would do well to extend the Child Welfare Scheme throughout the city, so that lady health visitors and midwives may be in a position to be in close touch with every birth in each and every division of the city, especially with every one in the poorer and illiterate classes. Granting that the present system of registration is as accurate as it can possibly be, conclusions will have to be arrived at.

In this city, the death-rate for the year 1920 is 41·3 as against 52·4 in the previous year, the mean death rate for ten years being 40 per 1,000. Under normal hygienic conditions, the rate of mortality should be 20 per 1,000, although many European cities show a death-rate of 15 per 1,000. The loss of life among the civil population is obviously due to the failure to effectively check preventable diseases and deaths, despite the efforts of the Health department to restrict and control diseases. Although it may easily be said that no real progress without the co-operation and help of the people can be made, yet a department of public health

should bear a portion of the blame on itself for not being able to extend its energies in all directions. Want of a continued policy in the works pertaining to public health is a serious draw-back in almost all Indian Municipalities. In the Madras Corporation, this will be quite evident, if the History of the Health Department is carefully scrutinised. The frequent splitting and blending of conservancy and sanitation, the introduction of food-inspection by Special Inspectors and its subsequent abolition, the scrutiny of plans for the construction and reconstruction of buildings being at times conducted by both the Health Department and Works Department and at other times being entirely left to the latter, the provision of a quarantine pen for the sheep intended for human food and the abandonment thereof, the establishment of rubbish transport stations at a high cost and their abolition, and the relinquishment of the construction of Infectious Diseases Hospital, soon after the acquisition of land for the purpose at a very high price--all these show to any casual observer a thorough want of continuity of policy, which is very essential for the effective working of the department of public health. It will be well, therefore, if the Corporation lays out once for all the several directions in which its energies should be extended for procuring the ways and means of gradually improving and maintaining such works as are necessary for the well-being of the public at large.

A department of health depends on the Engineers for the adequate and constant supply of pure water, for efficient drainage, and for the proper maintenance of roads, and therefore cannot hold itself entirely responsible for the various ailments or diseases, which may be the outcome of the improper conditions of the tripod of public health, *viz*-water, drainage and roads.

In a Corporation, where the Health Department has no control over new constructions, excepting cases deemed fit by the Engineers, and where inspection of houses regarding insanitation is scarce and where sufficient accommodation cannot be found or provided to abate over-crowding, death-rate cannot but be high.

The public health of a locality is closely connected with the nature of the dwellings and their surroundings. How many people are dull and depressed, how many have bad head-aches and sore-throats, how many die of fevers, consumption, cholera and such other diseases, due to living in imperfectly constructed houses, where insanitation is the monarch of all it surveys! The extent and virulence of epidemics are also largely to be attributed, amongst other causes, to the highly insanitary nature of the dwellings occupied by the mass of the people. It is therefore imperative that people should dwell in healthy dwellings with good sanitary surroundings, so that a great number, who die, need not, and a great many, who live sickly and wretched may be well and happy.

It is a common sight to observe that every single room and corner in a house is "To LET", and for this purpose every portion of that house is partitioned at various angles, with dirty thatties, gunnies or masonry walls obstructing ventilation and light and rendering the already existing window or windows absolutely useless for the intended purpose. This evil is accentuated by the several tenants cooking in their respective portions of the common verandah adjoining their rooms, with no provision for the escape of smoke. As if to crown all, this overcrowded house is more often provided with a single small latrine, which, being used by all the occupants, becomes filthy and nauseating to the highest degree and depends for its cleanliness upon the intractable Madras private thoty, on whom the Corporation has no control. The tenants in such houses are blessed only with small belongings, and even these they store and stack in the living rooms, along with their household necessaries, reducing the available air-space. As if the existing causes of insanitation are not enough, human beings dwell with cattle, horses, dogs and other animals in promiscuous intimacy. The danger, if a person in such tenement falls ill and is nursed in such surroundings, can better be imagined than described. An over-crowded house and an over-stacked room are by no means the best place for a sick man to recover his health in. Besides, he is a danger to others living with him, more particularly, if the disease he suffers from, is contagious or infectious, for everything he throws out by way of excrement, by breath and by mouth, nose, or skin, is injurious to the family and the co-tenants. The process of contamination being carried either by inadvertence or by a vitiated and polluted air, the tenement houses become active centres of infection for the entire neighbourhood.

There are already in the city model paracherries and model dwellings built by the Corporation and by the Government for their employees, and by the Buckingham and Carnatic Mills for the labour staff. In the construction and maintenance of these establishments, greatest pains have been taken to ensure the comfort and convenience of the inmates, consistent with the canons of hygiene. These model houses are being appreciated by the several hundreds of the inmates thereof, but their value is likely to be belittled on the ground that the benefits conferred on a few hundreds are not of any general utility. This is a mistake. These lodgings by themselves stand as a bright contrast to the unwholesome and filthy abodes to which several of the inmates were used. They familiarise the poorer classes with the idea of cleanliness and the practical advantage of it. Indirectly, they bring about strong public opinion grounded on the experience of those conditions which favour cleanliness and comfort. Besides, such model houses serve as a training ground for the poorer classes, drilling them into decent and orderly habits and accustoming them to a higher standard of household accommo-

dation, on pain of expulsion, in case of infraction of the rules and regulations made for the purpose of procuring cleanliness sobriety and general propriety of conduct of the inmates of the dwellings. It is therefore imperative that the Corporation, with the necessary aid of the Government, should extend model dwellings on a greater scale and should launch upon a definite City Improvement Scheme. This should be largely supplemented by the creation of private model dwellings, consistent with economy and sanitation. Such private model dwellings can be run even as a business concern, the owner or owners thereof being content with a reasonable rate of interest on the money invested. With the increasing appreciation of such dwellings by those persons for whom they are intended, the owners of such dwellings may ultimately find them a paying concern.

Now coming to infantile mortality, the death-rate was 279·3 as against 329·0 in 1919, thereby showing a reduction in the infantile death-rate. Yet, the rate is admittedly high, when compared to that of European cities, and efforts are being put forth to markedly reduce it. Nothing but vigilant attention to child hygiene will bring about improvement in the health and condition of infants. The Corporation has done well in having laid out a child hygiene programme or child welfare scheme to reduce the infantile mortality rate. And in places where the activity of the scheme is in full force, there has been a comparatively marked reduction in infantile death-rates.

Infant and child mortality cannot be reduced to any appreciable extent by measures directed solely to the mother and child. For instance, of what avail is the advice to the mother in the care of her baby, if the father is a syphilitic, if the baby's aunt or Aya who fondles the child has tuberculosis, or if the mother lives in a place or community where infectious diseases prevail unnoticed? Of what avail is advice for child feeding, if there is no provision for clean milk, and where sanitary regulations for the protection of food and drinking water are not fully enforced? Health is therefore largely a community matter, and it is the community standards which establish the mortality rate and determine largely whether the individuals shall be well or whether they shall sicken and die. The department of public health should therefore be assisted by a Veterinary and Venereal Department. Besides, it should be well organised and efficiently worked, with the help of a system of co-operative associations, societies, or other agencies which have for their special object the benefit of the child and the mother. In Madras, within a few years, several such excellent associations and magnificent institutions have sprung up. The number and the kind of these institutions and the extent of the scheme laid out and worked by them are incorporated in the report in accordance with G.O. No. 653, P. H. Mis., dated 10th June 1921. Thanks

to them they have been useful in several ways to the Department of Health, besides accomplishing much substantial work. And they will be of great utility in the efficient carrying out of a perfected child and maternity scheme, as also in the improvement of general sanitation.

Whatever may be the activities of the Health Department in the numerous directions mentioned above and whatever may be the perfection of sanitary measures adopted for improving public health, they will all prove abortive, and it will be impossible to secure immunity from filth diseases, unless conservancy is effectively carried out. An effective system of complete and punctual scavenging is absolutely essential for making villages and towns neat and healthy. An imper, fect system of conservancy necessitates the dense civil population to live, move and have their being in an atmosphere of their own excrements and refuse, exposing them to danger and loss of life from diseases which are the outcome of pollution of air and soil by excrementitious matter. It is therefore incumbent on the Corporation to organise and maintain a well workable scheme of conservancy. The amalgamation of sanitation and conservancy had gone a great way in reducing the work of the Health Department in all directions. The Sanitary Inspectors had so much work to do or so many duties to discharge that they accomplished nothing to perfection. Conservancy has been separated from sanitation in the beginning of the current year and is undergoing a six months' trial. And it would be obvious to the Corporation and the rate-payers that the separation is to their good.

The most important step in the purification of air is not only the measure of regular and systematic collection, speedy removal and inoffensive disposal of all the refuse and filth in and around dwelling houses, but also the abolition of cesspools, ditch drains and imperfect masonry drains, which so largely abound, particularly, in paracherries and hutting grounds, adding insult to injury, to the health of the residents thereof. Steps are now being taken to bring about an improved system of drainage by the Corporation itself or by owners, by service of notices. Meanwhile strenuous efforts are put forth to clean and keep clean cherries and hutting grounds and to provide ample water-supply, adequate latrine accommodation, lighting and improved roads and pathways therefor.

That valuable public support, which could lead to real progress and sanitary advance in fighting against disease and death, and that popular co-operation, which is so very essential in the interests of the people to brighten their lives, are still denied to the department of public health which is, in a very large measure, due to ignorance of the masses, a great majority of whom are illiterate. In combating social habits, religious beliefs and superstitious ideas, the department of health

looks to the education of the masses. The establishment of model primary schools under the auspices of the Corporation is a step in the direction of securing educational influence, by holding up before the pupils a standard of sanitation, which will improve their social habits, dispelling ignorance, and elevate their character. Primary education is therefore a measure of sanitary importance of the first magnitude, and until it is made compulsory for all classes and for both sexes, ignorance and superstition will still circumvent the best efforts of the sanitarian. The Health Department therefore begs to urge on the Corporation the necessity of increasing the number of model schools, where simple instructions on sanitation, cleanliness etc., may be imparted to the would-be citizens, in addition to their usual lessons.

Poverty is a great bar to sanitary progress. There is no use in telling a poverty-stricken mother, who has no milk of her own, that she should not stuff her young babe with rice or kanjy and that cow's milk should be used. There is no use in sermonising to a very poor family on the importance of a well-ventilated dwelling with necessary air-space and impermeable flooring, when household utensils and furniture are scarce, when clothing is scanty, and above all, when one meal a day is probably the rule, that meal being in quantity insufficient and in quality poor. Under such circumstances to combat disease is no easy thing. The public health of a city means the health of its masses, and the masses will scarcely be healthy, unless they be at least moderately prosperous. To better the condition of the poorer classes will be a distinct gain to the Department of Public Health and is a matter to be dealt with by the political economist. However great the efforts of the Corporation and the social welfware institutions in improving general sanitation might be, and however educative their advice for cleanliness, washing, clothing, etc, might be, yet in the absence of the means of preserving cleanliness, facilities for good living, and the wherewithal for maintaining healthier houses and leading happier lives, their efforts are bound to fall short of their expectations. It is therefore not only necessary to insist on cleanliness, but is also incumbent to bring within the reach of the poor those facilities and comforts, which will raise them from dust and dirt and elevate them to a healthy mode of living.

Undertakings of model dwelling houses, public baths, public laundries, recreation grounds for the children of the poor and such other facilities must necessarily be by private venture or by public benefaction, on both of which social workers must rely for their consummation. In the meanwhile, we can still make the lot of the poorer classes bearable and better, if anything can be done by way of improving their situation in any possible and desirable direction. It will be well

for social and welfare institutions, in addition to the magnificent work they are accomplishing, to group themselves into committees, each raising funds for a distinct object of providing baths, laundries, recreation grounds, milk-supply, etc., as the case may be, in particular localities. The outlay on these establishments will be comparatively small and will meet the immediate requirements of the poor residents. Money can be found by appealing to the benevolence of the public. Sufficient influence should be exercised upon the owners and conductors of theatres, cinema shows, etc., to devote some collection, month by month, towards the betterment of the poor classes, aid may also be obtained by the institution of lotteries and the like. Great as will be the help from the above, the main burden rests on the educated and wealthy classes to improve the sanitary circumstances of the poor.

It is said that the alpha and omega of the Municipal administration is care for public health. Public health should therefore take precedence in the estimates of expenditure, and there should be a continuity of policy in carrying out health works. If we keep in view the very large number of persons who die on account of bad sanitation, no expenditure can be grudged which would lessen death-rate among the people. The annual tax now paid in change of air, in time of sickness, in loss of service, in the breaking up of families, in the illness or death of bread-winners is incalculably greater than any burden that improvement of sanitation can induce. And it devolves on the Corporation and the Government to freely finance Sanitary Works of far-reaching value.

C. SINGARAVELU.

SANITATION.

Officers of the Health Department.—Dr. C. Singaravelu Mudaliar, Senior Assistant Health Officer, in charge of Central Range, was granted combined leave for a period of 15 months from 6th July 1920. Dr. S. Isaac Second Assistant Health Officer, in charge of the North Range, was in additional charge of the Central Range. Dr. G. Raman Pillai, Assistant Health Officer in charge of the South Range having resigned his appointment in the Corporation from 1st March 1920, Dr. P. Sadasivan was appointed in his stead from 1st April 1920. Rao Bahadur Dr. K. Raghavendra Rao who was confirmed as Health Officer in the month of March 1920 continued to be in charge during the whole year under report.

Administration.—For administrative purposes, the city was divided into three ranges, north, south and central, the north range comprising the first 11 divisions, the south the last 9 divisions 22nd to 30 divisions inclusive, and the central the remaining 10 divisions. The general sanitary and conservancy measures and the work of vaccination and vital statistics, etc., were under the immediate charge of three Assistant Health Officers, one for each range. Each division was in charge of one Sanitary Inspector for all Health purposes, excepting the 16th and 22nd divisions which were placed each under two Sanitary Inspectors. The number of process servers was increased from 20 to 32. The Conservancy Overseers were done away with.

The nature of work of the sanitary section of the Health Department is briefly described in paragraph 198 of the Corporation Code, Vol. I.

The several items mentioned therein will be dealt with, as arranged in the Municipal Act, to facilitate reference.

Water-supply.—Although the entire responsibility of design and construction of water works rests with the Special Engineer and the City Engineer, yet the health staff insist on the importance of water supply, which should be, in quantity ample, in quality pure and in distribution constant and accessible. Attempts were made by the Health Department for the examination of filters and the working thereof and also the examination by the Director, King Institute Guindy of supplies of water from time to time to check its purity. Additional filters were being constructed during the year under report, and further, to ensure clean water-supply by chlorination, a small laboratory is to be fitted up at Kilpauk Water Works under the charge of an Analyst, who is to work for the time being directly under the Director, King Institute, till the experimental

stage is over, when, he will be placed under the direct charge of the Health Officer. The insufficiency of water-supply to the paracherries and hutting grounds in the city leading to the troublesome and unwholesome necessity of storing water in small quantities and in dirty receptacles has long been recognised as a menace to the public health. Landlords always shirk to provide such cherries and hutting grounds with sufficient number of water taps. The poverty of the people also prevents them from providing themselves with necessary taps. In the current year, strenuous efforts are made by the Corporation to provide cherries and hutting grounds with the required number of taps and thereby to secure free and gratuitous supply to areas where there is water scarcity.

Drainage-Public and Private.—The provisions of Sections 176 to 183 of the Municipal Act were for the most part carried out by the Works and Special Works Departments in conjunction with the Health Department. During the year under report, the drainage of the following areas was completed:—

1. A 6-inch sewer with house connections in Muthukrishna Iyer street was laid at a cost of Rs. 1,553.

2. The sewer in Aslam Bee Street, Meersahibpet was extended and connected with the manhole in Angamuthu Naick Street at a cost of Rs. 850.

3. A masonry drain was constructed connecting the drainage of the houses in the northern portion of Rundall's Road with the drain in Hunter's Road.

4. A new side drain, around Ammen Covil, in Post Office street, 7th Division, was constructed.

5. The construction of a new side drain in Dharmaraja Covil lane in the 17th Division, was completed.

6. A sewage dumping pit was constructed in front of lascars lines, Vepery High Road, 19th Division.

7. The big open side drains on either side of Triplicane High Road were divested of all sewage and were made to serve as sheer storm water drains and were put in proper order and covered with cuddappah slabs with openings at sufficient intervals.

8. A new drain was also constructed in Strahan's Road, 17th Division.

During the year, in addition to the above drainage works, portions of the 9th, 10th and 12th Divisions were also sewered. Many of the open side drains are in a broken condition, repairs to which are withheld in anticipation of the introduction of sewers. While such a course is no doubt justifiable from an economic point of view, in areas where sewering is to be taken up immediately

3

there seems to be no reason why the side drains in other areas should be left in disrepair. Broken drains do not facilitate proper cleaning and prevent free flow of sewage.

In the purification of air, the most important step is the abolition of cess-pools, ditch-drains and imperfect masonry drains, which mostly abound in paracherries and hutting grounds to the detriment of the health of the residents thereof. As bad sanitation of the places of the poorer classes is a matter of grave concern, it is the duty of the Health Department to insist on the establishment of an improved system of drainage in the said areas. Stagnant sewage water acts like a double-edged weapon. Emanations from cess pools and ditch drains, etc. rise up into the air and poison it, and by downward percolation, sewage sinks into the soil and pollutes water. The latter increases the liability to cholera, typhoid, etc., while the former brings about diarrhoea, sore-throat, fevers, etc. Statistics show that the said diseases first start in cherries and hutting grounds where there is no drainage system to speak of. Attempt is now being made to bring about a system of drainage in undrained areas by the Health Officer, with the help and co-operation of the City Engineer and the Special Engineer. During the year under report, necessary attention was paid by service of notices and compulsory compliance thereof towards the maintenance of order and cleanliness of house drains Instructions regarding new house-connections were given to the Works Department for carrying out the necessary work. Delay in these cases, however, much to be deplored on sanitary grounds, seems inevitable in some cases. Steps were also taken for the provision and maintenance of troughs and pipes for the disposal of storm water. And the Special Works Department were also active in the construction of big storm water channels to prevent stagnation.

Latrines-Public and Private.—During the year under report there were 145 public latrines, of which, some were of the approved flush-out type, others were masonry or of bucket system, while the remaining 70 were sanded ones. It is not known why the Health Department failed to insist on the displacement of the sanded and masonry ones by the flush-out type, wherever there were the necessary sewer connections and an adequate water-supyly. The only work that was carried out during the year is the provision of a corrugated iron roof for the flush-out latrine at the junction of Pophams Broadway and Monegar Choultry Road. Many of the public latrines are admittedly a nuisance, due partly to their misuse by the people and partly to defective conservancy. And steps are now being taken to adopt stringent measures to counteract the latter cause by securing proper conservancy and regular disinfection.

The Corporation is unable to provide as many public latrines as are urgently required, on financial grounds. And it is unfortunate that owners of

hutting grounds and cherries make no attempt whatsoever to provide their tenants with suitable latrines, although Section 185 of the Act specially provides for the licensing of these. Attempts are now being made to secure water-supply and proper lighting close to public latrines, which were unfortunately in a much neglected condition. During the year, the provision of latrines by persons employing labourers by owners and occupiers of dwelling houses, and by owners of markets and cart-stands, was insisted upon. The necessity for more public urinals need not be left un-mentioned, as their want has been and is keenly felt.

Scavenging.—Section 202 relating to scavenging will be dealt with under conservancy.

Streets, Public and Private—Sections. 202 to 223.—Although attempts have been made to prevent encroachments on streets by disallowing projections and other obstructions, by removing or altering existing encroachments, by granting or by refusing licenses in narrow streets for balconies, sun-shades, weather-frames, etc., yet there is nothing to show that steps were taken during the year under report in the direction of provision of wide roads, improvement of public streets, or preservation of available open spaces, or acquisition of house-property for the removal of congestion under Section 207, to ensure free movement of air and high standard of the purity thereof. Only a few of the streets are watered to lay dust. What with the prevailing high winds, and what with the increased motor traffic and indiscriminate deposit of house refuse on road sides, the atmosphere of Madras is so impregnated with dust and dirt, that the mortality of the city is high from diseases carried through the agency of such dust-laden air. In order to prevent dust it is necessary to maintain proper roads which are paved, metalled or gravelled and tarred and watered which will not favour retention of filth. The extension of gravelled or metalled streets into all paracherries and hutting grounds is essential for the cleanliness of soil and air and the consequent lessening of death-rate. Expenditure in this direction should never be grudged.

Building Regulations.—(*Section* 230 *to* 267).—It is regrettable to notice that there was no effective control over building operations. Plans accompanying applications for erection, re-erection and repairs to buildings were invariably received in the Works Department for scrutiny and remarks, as to ventilation, air-space, latrine accommodation, drainage and other sanitary arrangements. Only now and then references were made to the Health Department, in cases where the Works Department was not in a position to decide the sanitary merit or demerit of the proposed constructions. It is therefore obvious that there was no effective control or sanitary regulation of building operations. No town can be healthy where there is a laxity in the enforcement of sanitary building regulations. The Health Department has the power to insist on the demolition and reconstruction of insanitary

buildings. If so, it should be granted that it has also the power to prohibit the construction of new unhealthy buildings. It is not known why the scrutiny of all plans was handed over to the Works Department. Strict enforcement of the sanitary regulations pertaining to buildings is a most important part of the work of Sanitary Inspectors for the rules and orders on the subject require that all buildings should, before completion, be inspected with a view to verification of sanctioned plans and with a view to efficient drainage, *vide*, Section 178 (4). It is therefore incumbent in the interests of the well-being of the city and public health that no plan should be sanctioned by the Corporation without a careful scrutiny and sanction of the Health Department, so that there may not be any breach of any of the sanitary provisions of the Act or of any rule or bye-law made thereunder.

Dangerous Buildings.— (*Sections* 258 *to* 260).—The sanitary section adopts necessary precautions in cases of dangerous buildings, tanks, wells, etc. and references are always made to the Works Department to execute such works as are required to maintain the sanitary condition of such buildings, etc. Delay in carrying out the sanitary suggestions pertaining to dangerous buildings is rather regrettable.

Control over waters, etc.—(*Sections* 262 *to* 268).—Insanitary tanks and wells were filled up, while others were permitted to remain on condition that sanitary requirements should be carried out in due compliance with the orders of the Health Department. A definite and systematic policy should be adopted in treating wells and tanks of an injurious nature. Domestic wells in use should be frequently cleared of all silt, disinfected and furnished with light fitting covers, cemented or otherwise, and provided with hand-pumps. The energies of the Health Department should be directed towards the prohibition of new wells in places where there is ample public water-supply and to avoid wells becoming a breeding place of mosquitoes, or in any other respect, a nuisance. This subject will be more fully dealt with under malaria.

Abandoned Lands, Untrimmed Hedges, etc.—(*Sections* 269 to 271).—Inspection of these places and prevention of untenanted buildings and lands from becoming a resort to idle and disorderly persons and a nuisance form part of the routine duties of the sanitary staff. 46 notices under these sections were served during the year; and of these, 45 were complied with, either voluntarily or after prosecution. In the enforcement of these sections, the difficulty invariably felt by the staff was to find out who the owner or the claimant of the building was, and if such owners or claimants were in the mofussil, the difficulty was considerably enhanced, and hence the inevitable delay in achieving the desired object.

Insanitary Buildings.—(*Sections* 272 to 277). 263 houses were inspected during the course of the year under report, with a view to remedying sanitary

defects and 222 houses were improved. To secure sufficient internal ventilation by enforcing the provision of windows, ventilators, enclosed openings, open spaces, etc., systematic house inspections are indispensable. The work of house to house inspection is also very important to abate over-crowding, by restricting the number of occupiers, consistent with the available air-space, to lime-wash or otherwise cleanse any insanitary building, inside and outside for sanitary purposes, to insist on the demolition and reconstruction of insanitary buildings, to prohibit the further use of the buildings unfit for human habitation and to make a decided advance in the work of relief of congestion. Even after making due allowance for the time required to make inspections, to serve notices to carry through prosecutions, the number of house inspections made during the year is very small. It is regrettable to note that this part of the onerous duty of the sanitary staff was unfortunately much neglected Besides, no definite scheme in this direction has been launched upon. House to house inspection books containing details of every house under the jurisdiction of the Sanitary Inspector, have not been properly maintained. And improvement both in the number of inspections and in the maintenance of such books may be looked for during the current year. No case of overcrowding was dealt with during the year and it has been found practically impossible to take action under Section 275 under existing conditions. Some portions of the city are highly congested, and almost every house is already so over-crowded that the enforcement of the section pertaining to over-crowding will only result in over-crowding another house. Unless the Corporation makes a decided advance in its work of relief of congestion, no good results will follow and overcrowding cannot be checked. Sanitary Inspectors are now required to furnish a definite scheme with necessary plans and sketches of the congested portions of their respective divisions, so that as funds become available, advance may be made. Ere long, the Corporation should launch upon a definite scheme of provision and extension of model houses to suit the needs of the growing civic population and to secure a sanitary and profitable return to the rate-payers.

Lodging-Houses (*Section* 279).—Lodging houses include hotels, boarding houses, choultries, emigration depots etc. The keeper of each lodging house should obtain a license from the Commissioner for carrying on the business. By the issue and renewal of licenses, the condition of these houses can be considerably improved and efficiently maintained. The bye-laws regulating the conduct of these houses were not strictly enforced during the year under report, as there was a considerable delay in framing and passing them. Further the Sanitary Inspectors have not had sufficient time and facility, as they were also in charge of conservancy in addition to sanitary duties. Lodging houses require personal inspection of the Health Officer or Assistant Health Officers to run them on sanitary lines; and to prevent over-crowding, it is necessary to specify the number of lodgers allowed in the lodging

4

houses. As the section is not penal, it is feared that much could not be done, and it is therefore incumbent on the Corporation to penalise the section.

Keeping of animals (*Sections* 280 to 286).—The Health Department has been active in enforcing the provisions in respect of keeping and feeding of animals. Any swine found straying within Municipal limits or unmuzzled dogs let loose in the city are destroyed under Section 281. The destruction of the latter is done at the expense of the Corporation, which makes the necessary allotment and places it at the disposal of the Commissioner of Police. The dog catchers, on handing over the dogs to the Superintendent of the Incinerator, obtain receipts, and on production of these, the Commissioner of Police disburses rewards at the rate of 4 annas per dog or bitch and one anna per pup. All dogs which are rabid and unhealthy are immediately destroyed. The rest are kept for three days and if there are no claimants they are destroyed. Four thousand three hundred and twenty-one dogs, 4,050 bitches and 67 pups were killed during the year. Destruction of dogs is a desirable sanitary measure to prevent hydrophobia and loathsome skin diseases. For this purpose, the Corporation maintains two dogs homes and two lethal chambers, one set at Krishnampet Incinerator and another at Basin Road Incinerator to facilitate cremation of the destroyed dogs. The feeding of dogs, while in dogs home is conducted deparmentally and the feeding charges for the year have come to Rs. 725-15-0. During the year the total expenditure was Rs. 2,822-14-0, while the total amount realised by return of rewards, feeding-charges, etc., for dogs, claimed was Rs. 275-10-0, not to mention of the collection of license fees which otherwise would have been irrecoverable.

Sub-sections (*b*) & (*c*) of Section 280 have not been availed of in the past, although it is a matter of sanitary concern to prevent keeping of animals on one's premises, so as to be a nuisance or dangerous, and to prevent milch cattle being fed on filth. There is difficulty in the conduct of prosecutions pertaining to the breach of sub-section (*b*) as the magistrates contend that it is not enough if the Corporation declares that the animal which is kept is a nuisance or is dangerous unless the occupiers, tenants or those living in the premises in which the said animal is kept should admit there is nuisance or danger.

Cattle-yards-cowsheds, etc :—There were 600 cattle-yards in the city. Thirty were refused licenses, 80 were granted unconditional licenses and the remaining 490 were granted licenses subject to the carrying out of sanitary improvements within a prescribed time-limit. During the year measures were taken to prevent stabling of milch cattle in dwelling houses, and wherever separation was found practicable, the owners of cattle yards were directed to partition off the cattle-yard from the dwelling house proper. The increase in the grant of conditional licenses is to gradually improve the sanitary condition of the cattle-yards without interfering with the trade. 500 prosecutions were launched and 293 convictions were obtained

during the year to enforce the terms of licenses. A large model cow-house is maintained by the Corporation in the city where numbers of milch cattle, chiefly buffaloes, are housed. The stalls are given free to owners of cattle. There are also rooms set apart for storing straw, grain and other necessaries of cattle on a nominal rent. The Health Department supervises and controls the model cow-house, in so far as the removal of waste and maintenance of effective drainage and other sanitary conditions are concerned. But the storage and transport and sale of milk and milk products are still left to the owners of cattle. A system like this can only do away with a few insanitary cattle-yards close to the cow-house, without exercising any control over the milk supply of the city. Further, due to its being at distance even from the divisions which it is intended to serve, the cow-house does not much attract the cattle-keepers of the city, and so, our object to do away with most of the insanitary cattle-yards in congested localities by this means remains frustrated. The establishment of large dairy farms outside the city boundaries by capitalists and co-operative societies and of milk-shops throughout the city, where the milk brought in from the farms under the sanitary control of the Health Department could be sold, will go a great way in securing a clean supply of milk. In Bombay dairies have been established by private enterprise and have been controlled by the Health Department. These establishments, on account of prohibitive prices charged, are useful only to the well-to-do classes. But the sanitarian is more concerned with the supply of pure milk to the poorer population among whom birth and death rates are higher. For this purpose the Corporation should maintain at least a dairy farm of their own, where as many milch cows as finance will permit could be housed, fed and milked under sanitary conditions. Milk therefrom should be sent under proper control to the Corporation milk-shops in the poorer parts of the city for sale at reasonable rates. If a start is given in the above direction, it will be found advantageous in various ways. Besides decreasing the infantile death-rate, it will serve as a model for the maintenance and conduct of private dairy farms. It will also become a suitable place for cattle breeding, and the calves, if milkers, would in a few years increase the supply of milch cows and if bulls, would serve for conservancy purposes and thereby decrease the expenditure on the purchase of bulls. The cows when dry and the adult calves may be fed economically with sun dried harialli grass from the sewage farm, till such time as they become useful and serve the public need. Such a farm would not only be a paying concern but would also admirably help the Corporation in fixing the standard of milk and milk products. If funds do not permit maintenance of dairy farm, the next best alternative would be to provide as many cow-houses as are necessary, close to localities where congestion of cattle-yards exist, and run them on the lines of the new-existing cow-house. These cow-houses are bound to become very popular and serve as models if they are located in suitable places.

Stables and cart-stands.—Insanitary conditions similar to those obtaining in cattle-yards are met with in stables and cart-stands. Special attention was paid to them in the matter of drainage, ventilation, impermeable flooring, proper roof, etc., and daily removal of manure from these places was insisted upon. Attempts were also made to prohibit the dwelling of syces and their families in stables. Licenses for 130 hack stables were issued during the year and in 4 cases licenses were refused.

There are within the city 13 private cart-stands which are frequently inspected by the sanitary staff to secure general cleanliness. There are only two Municipal cart-stands, one opposite to the Pachaiyappa's College and the other at Elephant Gate. The latter is under the supervision and control of the Health Department, while the former is under the Revenue Department. The right of collecting rents and fees from the Elephant Gate cart-stand and the bazaars attached thereto was as usual auctioned during the year and the amount realised was Rs. 9,100 as against Rs. 10,000 in the previous year. The income derived by the Corporation from cart-stands is admittedly low, when compared with the income obtained by the mofussal municipalities, from the same source. Had the Corporation at the very outset pitched upon these as a profitable source of revenue, so many cart-stands run by private enterprise could have been disallowed. Further, there is a good amount of difficulty experienced by contractors in the daily collection of rents and fees in a public cart-stand. The moment the right of collection of fees is let on auction to the highest bidder, the occupiers of bazaars give a lot of trouble at least for some months at the beginning of the year to recognise the contractor as the lawful authority. They are never tenants of the Corporation, nor are they in possession of stalls under one and the same contractor for a period of not exceeding a year. And if they are irregular in payments, considerable difficulty is felt in ejecting them and legal action is even found necessary. The difficulty of collection in a cart-stand may be easily inferred from the reduction of income from year to year, so much so the Commissioner intended for the current year to run the Elephant Gate cart-stand departmentally. The Corporation is during the current year putting forth strenuous efforts to put up public cart-stands at a cheap cost and at suitable sites. And it is open to question whether departmental working of these cart-stands would fetch more revenue than at present.

Industries and Factories.—(*Sections* 287 *to* 289).—During the year under report the sanitary staff supervised and controlled all places where dangerous or offensive trades were carried on. Wash-houses, skin-godowns, dyeing yards, bake-houses, condiment manufactories, bone-stores, etc., were more or less frequently inspected and sanitary conditions were generally improved.

Brick and Lime-kilns.—There are 19 brick-kilns in the city, in addition to the Government brick-kiln in Poonamallee High Road. They are scattered in the outlying divisions, viz., 3rd, 4th, 16th, 18th, 22nd, 29th and 30th. Lime-kilns are similarly situated. These kilns close as they are to public roads and residential quarters, are a source of nuisance. Volumes of smoke emanate, and the fumes from the slaking of lime and the dust thrown out during the process of sifting considerably inconvenience passers-by, and the Corporation has taken definite steps to locate them outside Municipal limits and close to toll-gates, and there is a strict order that no new brick or lime-kiln should be licensed within municipal limits which is rigidly enforced. It would be well if the brick-kiln on the Poonamallee high road is expeditiously removed therefrom.

Oil mills.—There are within the city 137 oil mills, 35 were granted un-conditional licenses, while 102 were given conditional licenses. These mills are generally situated in the midst of congested parts of the city and are grouped together in large numbers. Their sanitary condition does not compare better than that of cart-stands and cattle-yards. The incessant and unbearable noise produced by the working of the mills is a veritable nuisance to the surrounding population. Further, the mills are active centres for the propagation of disease among cattle, as the animals used for driving the mills frequently suffer from infectious and epizootic diseases. The only solution in the prevention of the nuisance is their wholesale removal to less inconvenient and non-populous localities. Initial step has been taken by the acquisition of land in the 28th Division for locating some of the most objectionable mills in Triplicane, and the earlier the removal is effected, the better it would be for the health of the Triplicane population. A similar action should be taken with regard to the other groups of mills situated in other divisions, particularly in Georgetown.

Paddy-boiling.—415 applications were received for the licensing of paddy boiling houses during the year under report. Of these, 20 were refused, 355 were granted conditional licenses and 40 unconditional licenses. These houses were frequently inspected to bring about cleanliness and general sanitary condition. Suitable receptacles for soaking paddy and impervious platforms for drying purposes were insisted upon and an adequate water-supply also. Despite all supervision, in places where this trade is carried on, there is vitiation of the surrounding atmosphere. The proximity of house latrines close to paddy-boiling places and the existence of shallow surface wells therein, in addition to scarcity of public water-supply lead to insanitation in the process of paddy-boiling. All possible steps should therefore be taken to limit the number of licenses and to isolate paddy-boiling houses away from residential quarters to well drained localities.

Aerated Water Factories.— There are 30 licensed aerated water factories in the city. Of these, 18 were granted unconditional licenses, while the remaining 12 conditional licenses, demanding sanitary improvements within a time limit. The factories are equipped with the necessary filtering and boiling plants, and yet the aerated waters turned out are mostly impure and even contain suspended impurities and dead insects such as flies, mosquitoes, ants, etc. The employees in some of the factories are quite ignorant of the methods of working the plant. The capacity of the sand filters and the cleanliness of candles employed in Berkfeld filters receive no attention. The sand filters are not worked properly. Sufficient time is not allowed for the formation of the gelatinous layer which is very essential for the arrest of microbes, and even if such a layer forms, it is quickly disturbed by the employee in his eagerness for renewing the sand, and no good results follow. The filtrate is very often worse than the water filtered. Finally to ensure the supply of pure water, they are asked to boil the so-called filtered water, before it is aerated. This, most of the factories, fail to do. The sale of impure waters cannot be stopped, until an analytical laboratory is established and worked. Meanwhile if there are private companies which can supply boiled water for reasonable rates under the supervision of the Health Department, the factories may be insisted upon to get the supply from such companies for aeration purposes.

Bake-houses.—There are 54 bake-houses in the city. Of these, 6 were granted unconditional licenses while the remaining 48 were given conditional licenses subject to sanitary improvements. These were inspected regularly by the sanitary staff with a view to have the suggested improvements carried out. The employees of the bake-houses are bound to produce certificates of health for conducting the business. Accommodation in many cases is quite inadequate. Workmen invariably fail to wear clean aprons while at work, not to mention of their unclean habits. The incessant use of bake houses affords no facility for daily cleansing. Insanitation in bake-houses is therefore common. The only possible way by which these places can be improved is frequent and rigorous prosecutions and cancellation of licenses.

Ice-Factories.—There are only two ice-factories in the city run by private enterprise. These are annually licensed and the sanitary staff make frequent inspections to see to the maintenance of proper sanitary conditions and to the purification of the water which is to be converted into ice. The out-put of the quantity from these two factories is quite insufficient to meet the demands of the city, as evidenced by the scarcity of ice felt by the civic population, more particularly in summer. It would therefore be advantageous to the Corporation, if it would run an ice-factory of its own, not only with a view to ensure the supply of pure ice at cheaper rate to the ratepayers, but also make it a profitable source of revenue.

Sweet-meat Bazaars.—The sanitary staff paid frequent visits to improve

the sanitary state of sweet-meat bazaars. In issuing licenses to these bazaars, certain sanitary improvements are demanded. And although, in most cases, those improvements are effected, yet the maintenance of the sanitary condition is found practically difficult. Our troubles in this direction will cease, if these bazaars are intended only for the sale of sweets. In 99 per cent. of the cases, these bazaars are also places where sweets are manufactured. This introduces the question of adequate accommodation. Generally the place in which sweet-meat bazaar is located is very small and the bazaar-men are necessitated to extend the stalls over the street drains, which is admittedly an objectionable procedure. Although periodically the bazaars are lime-washed, still they present a dirty appearance, owing to volumes of smoke and soot incessantly issuing from the ovens. The employees have the unclean habit of cleaning all pans and vessels on the street side close to side-drains. It is obvious how difficult it is to maintain sanitation. The Health Department enforces provision of glass-shutters, so that the sweets exposed for sale may be protected from flies, dust, etc. These shutters are seldom brought to use on the ground that they impede trade. The only remedy to bring about better conditions lies in the insistence of sufficient accommodation. In the interests of public health, production of health certificates by the employees of sweet-meat bazaars may be enforced. Adulterated oils and ghee are freely used in the preparation of sweets, and stale and fresh sweets are often mixed together. These and several other defects need attention. In the absence of a Corporation laboratory, nothing can be done to remedy matters.

Coffee Hotels.—As far as accommodation and general cleanliness are concerned, coffee hotels compare favourably to sweet-meat bazaars. In these places the sweets are preserved from flies, dust, etc., by keeping them in glass cases. But the sweets exposed for sale are not better in quality than those exposed in sweet-meat bazaars. Here also adulterated oil and ghee are freely used in the preparation of sweets. Coffee is often mixed with chicory and a very inferior milk, watery and adulterated, is used. Improvement in the quality and wholesomeness of the food-stuffs sold in these hotels can only be effected when a laboratory is established.

Washing and Bathing.—It is the duty of the Corporation to provide public dhobi-khanas to prevent washermen from washing clothes in unauthorised places under Sections 291 to 293. The Corporation maintains a dhobi-khana at Chetpet and another at Robinson Park, each under the supervision of a Superintendent. The Superintendent is held responsible for maintaining the sanitary condition and also for collection of rents from dhobies. The income from the two dhobi-khanas was Rs. 1,765 against Rs. 1,456-8-0 in the previous year. These two are insufficient to meet the demands of the city, and other arrangements throughout the city for public washing are very unsatisfactory. The majority of the dhobies generally us

the water from insanitary tanks ponds and surface wells within easy reach and also the Adayar river. The stones on which the clothes are beaten lie on bare ground and close to the source of water, and the foul washings find their way into the very source of water and into the sub-soil. The dhobies often store soiled and washed clothes in one and the same room which is generally small, dirty and badly ventilated, and very often the dhoby dwells in the same place. To counteract these evils, the Act provides under Section 287 power to demand licenses from professional dhobies. 183 applications for licenses from dhobies were received during the year, 8 were rejected and 175 were granted licenses subject to the fulfilment of sanitary improvements. The dhoby's house, the source of water-supply, the system of effectual drainage, the place for washing and drying, the place for storing dirty clothes before washing, the place for storing clean clothes, etc., should be approved before licenses are granted. The dhoby often becomes the medium of communication of infectious disease, should a member of his own house-hold or that of his employer be affected, and it is therefore important to see to the hygienic conditions of the dhoby's calling. Although a few dhobies from Saidapet, St. Thomas Mount and the adjoining villages of the city serve the purpose for the city, yet the majority of the dhobies do the washing within the city itself. Provision for suitable washing places is imperative and it would do well for the Corporation or the capitalist to provide an adequate number of dhobi-khanas in places where they are mostly needed.

During the year, a bathing fountain with separate compartments for males and females was constructed in the Trevelyan Basin division (13th division) by Mrs. Salla Gurusawmi Chetty for public use and handed over to the Corporation; and repairs and improvements were executed for the bathing fountain in Ponnappan lane, Park Town, 15th Division. There are also other bathing places located in Ice House Road, Thambu Chetti Street, Sivagnanam Park Peddu Naick Street, and in Wall Tax Road. Most of these bathing places are located in the midst of dwellings of fairly well-to-do classes and are used by them. But the sanitarian is more concerned with the personal hygiene of the poorer classes where their need is much felt. And it should be the look out of the Corporation and the philanthrophist to provide bathing places in all the cherries and hutting grounds and thereby contribute to public weal. Thanks are due to Mrs. Salla Gurusawmi Chetty for her beneficient charity.

Slaughter-Houses.—(*Sections* 294 *to* 298).—The Corporation maintains a slaughter-house for sheep, goats and cattle at Gantz Road, Perambore, and a small pen at Demellows Road for the slaughtering of pigs. These are in immediate charge of a Superintendent, aided by an assistant. The number of sheep and

goats slaughtered during the year was 279,417 and the number of cattle was 17,771 and the number of pigs was 1,809. All carcasses before removal are stamped with the Corporation stamp. There are 7 small bullock vans and 7 motor vans for the removal and distribution of the carcasses, piecemeat, etc. to the several markets and stalls within the city. A uniform fee of 6 pies for every loaded basket is charged. The total amount thus collected was Rs. 4 272-9-6. The right of collecting rents and fees for the use of the slaughter-house was as usual leased out and the total receipts under all heads including that of delivery of carcasses and removal of blood amounted to Rs.78,593-13-1 for the year 1920-21. During the year permission was granted for the slaughtering of sheep, goats, cattle and pigs in private houses, on occasions of religious ceremonies, festival, etc., and the number so slaughtered was 8 cattle, 1,536 sheep or goats and 2 pigs.

There is a general complaint that there is considerable delay in the delivery of meat to the distant markets of the city. To prevent such a delay and to bring about a clean method of delivery, motor vans are used. Even then, these go so frequently out of order, that delay cannot be avoided. Further, the bullock-vans and motor lorries are worked under loss to the Corporation. It would be better if this system of transit of carcasses is given up by the Corporation and the owners of markets are compelled to maintain their own vehicles for carrying the carcasses exposed for sale in their respective markets. This could be enforced as one of the conditions to be satisfied before licenses are issued for running markets. The kind of cart and its sanitary state must be certified to, by the Health Officer or his assistants. The provision of another slaughter house for the south range may also be considered.

Illicit Slaughtering.—A considerable amount of illicit slaughtering is no doubt carried on in the city. To detect illicit slaughter, Sanitary Inspectors inspect markets and meat stalls frequently and bring to book butchers exposing for sale carcasses without the Corporation stamp. Even then, there is difficulty in putting down illicit slaughter. The importation of carcasses, from the mofussil render the situation very difficult. If the Government cause a ruling that even mofussil Municipalities should use their distinctive stamps to carcasses of sheep, etc., slaughtered within their jurisdiction and that they should see that no unstamped carcasses should be taken outside their Municipal limits, it will be advantageous both to the Corporation and to the Mofussil Municipalities.

Condition of animals and the quality of meat.—The great number of animals are merely skin and bone and no wonder the quality of meat exposed for sale within the city is exceedingly poor and much below any accepted standard Further, animals are taken to the slaughter-house immediately after purchase. There

is neither time nor opportunity to examine them as to their state of health. The result is, that very often sick animals, or even animals suffering from infectious diseases, are slaughtered for consumption within the city. No doubt, a few cases of diseased animals are detected and seized, only after slaughter. To obviate these evils, the establishment of a quarantine depot for animals brought into the city for slaughter for food, a strict examination of the condition of such animals by a Veterinary Officer, and the issue of slaughter permits are indispensable. Attempt in this direction is now being made. The vacant portion of the slaughter-house and its surroundings are being apportioned out for a quarantine depot. To ensure a better quality of meat, it is desirable that a fixed minimum weight should be laid down for all animals intended for food purposes. A minimum of at least 20 lbs. should be demanded in the case of sheep and goat, and even this minimum will exclude 20 per cent. of the animals taken now for slaughter.

Milk trade.—(*Section* 299).—It is the duty of the sanitary staff to regulate the milk trade within the city and to issue licenses under Section 299. In dealing with cattle-yards, reference has already been made to this trade. It remains now to enforce strictly the by-laws relating to this trade.

Markets public and private butchers' shops, etc.,—There are two public markets within the city the Moore market and the Smithfield market. The right of collecting fees from the latter was leased out for the year 1920-21 for Rs. 3,000 against Rs. 3,500 in the previous year, while the collection of rents from the former is entrusted to the Revenue Department. The sanitary condition of these markets was satisfactory during the year under report.

There are 41 private markets within the city, licensed by the License Branch. The Health Department has control over these markets to bring about sanitary condition. These are divided by the Standing Committee into six classes according to their income, and the license fees leviable are Rs. 500, 300, 200, 100, Rs. 50, and Rs. 25. Six of the private markets were granted unconditional licenses during the year, while the remaining 35 were granted licenses subject to the fulfilment of the requirements within the prescribed time limit. The sanitary staff frequently inspected the markets and measures were taken to enforce the by-laws and regulations pertaining to markets. Some markets did improve, while in others, unsatisfactory conditions did continue. Overcrowding of stalls and the consequent exposure in the gangways of the articles of food still continue. Unless the markets are considerably extended, overcrowding will be in evidence, and there will be no possibility of effecting a check on the sale of articles of food on both sides of the roads and lanes adjoining the market places. Licenses to individual butchers carrying on trade in the markets and the insistence on the

production of medical certificates by them have gone a great way in securing a clean supply of meat. It is hoped that issue of licenses, to fish-mongers, poulterers, etc., under Section 309 will produce similar result in the supply of fish, poultry etc.

Vegetable markets.—There are three private vegetable markets for the whole city—the Macdonald market in the 7th division, the Kotwal market in the 8th division and the Bashiem Iyengar's market in the 29th division. Out of these, the Kotwal market is the chief centre for the supply of vegetables to the whole city. This is the market which receives vegetables from the mofussil for distribution to the various other markets. The sanitary condition of the vegetable markets other than Kotwal are satisfactory. The Kotwal market has become highly congested; overcrowding of the stalls has become the rule, and the gangways are thronged with food articles. Strenuous attempts are not made to maintain cleanliness in the market. Extension of the market is the only possible means of meeting the said irregularities. In several parts of the city, vegetables are frequently exposed for sale on streets and by the side of drains particularly in Anna Pillay Street, in Mint Street near Rasappa Chetty Street junction and in Wall-Tax Road near China Bazaar Road junction. As this is sanitarily objectionable, the Corporation should provide public vegetable markets to meet this want.

Sale of articles in streets.—Sale or exposure for sale of articles in streets adjoining markets and in a few specified streets should be prohibited or regulated under Section 310. It requires the sanction of the Standing Committee. No action in this direction seems to have been taken during the year.

Market regulations cannot be carried out intelligently, unless the owner, lessees, or contractors of markets appoint Superintendents with some Sanitary qualifications approved by the Health Officer. Such a condition has been included as one of the terms of the license, but unfortunately it has not been enforced. Attempts will be made during the current year to enforce it.

Public markets are not as much paying concerns as markets run by private enterprise. The reasons are not far to seek. They are :—

1. The Corporation while starting public markets did not aim at them as profitable sources of revenue, but only to serve as sanitary models for private people.

2. Markets run by private enterprise are located in suitable and paying centres to the detriment of public markets.

3. The Corporation would have done well, had it divined and prevented the grant of any license to private markets from time to time, under Section 303, and put up its own market.

4. The out-lay for the construction of a public market is far too much as compared to what private people spend in the construction of markets.

5. Strict observance of regulations in public markets is another detrimental factor. In private markets, there is a paucity of action just to avoid the tedious course prescribed by law in the matter of punishing the offenders

6. In private markets in the city the owners, lessees or contractors, often advance money to vendors presumably to help them in carrying on their business, but really to have a hold on them, so that they may not leave the market for another. It will be a profitable concern, if the Corporation would adopt a similar procedure with regard to public markets. The sum advanced may be easily collected with the daily rent in instalments. In other words a co-operative system to vendors in public markets will amply repay us.

7. In private markets, lessees and contractors are allowed a longer lease than those in public markets which enables them to build up trade. A yearly contractor fails to take any interest in the promotion of the welfare of the market. It would, therefore, be better if the Corporation lets the contract of markets once in five or three years at least.

8. In private markets the staff employed for enforcing order, discipline, cleanliness etc., is very meagre, whereas in public markets the staff employed for such purposes is superfluous and thereby a large sum is spent on its maintenance, thus unnecessarily draining away the income derived from such market. Both private and public markets should be so manned as to meet the requirements.

In conclusion if an increased source of revenue should be derived from markets, compulsory acquisition of existing private markets should be resorted to if permissible. And at the same time new public markets should be put up at the already available Municipal sites with very little expense in the way of construction and run either departmentally or by contract, let out once in five years at least, with a staff just necessary to meet the market regulations and with a co-operative system for vendors as an adjunct to the financial prosperity of the market.

Inspection of places for sale of articles of Food, &c.—(*Sections* 311 *to* 317).—Much attention has not been given to the inspection of the articles of food and drink. The reason is the absence of a laboratory under a competent analyst and absence of "standards" for food-stuffs, particularly for ghee, oil, milk, etc. During the year the construction of the building for a laboratory at Ripon Buildings has been completed and the installation of the necessary gas plant was under consideration and an indent was placed with Messrs. Baird & Tatlock London, for the supply of chemicals. With the installation of the chemical and

bacteriological laboratory, effective control can be exercised to secure the purity and wholesomeness of all articles of food and drink. It is doubtful whether the newly constructed laboratory buildings on the top of the tiffin rooms would suit the demands of a well equipped laboratory. This building bears no comparison, either in extent or in design, to the laboratory buildings of Bombay, Calcutta, Rangoon, Colombo etc. Even in these cities where extensive laboratories are put up and run at a very high cost, samples of food supplies have to be sent to the Government Chemical Examiners in addition to what is being done in the laboratories themselves. How much more will it be in the City of Madras where a very small building is put up to serve the same purpose !!

Even in the absence of a laboratory, vigorous action could have been taken by seizing, under Section 314, food articles which by changes in their appearance, odours, consistency, etc., could safely be pronounced unsound, without subjecting them to chemical analysis ; and so also even the sale of preserved and tinned provisions could have been controlled. The prevention of sale of unsound articles of food is the legitimate function of the Health Department and it was unfortunately a retrogade step to have abolished the post of two Food Inspectors whom the Corporation employed a few years back. A comparison of the statistics will reveal the amount of work turned out in this direction by the Food Inspectors.

A preliminary investigation of the condition of food-stuffs exposed or brought for sale within the city, of the sources of their supply and of the nature and extent of adulteration practised is necessary before the establishment of a laboratory. This important portion of the work was deputed to the Food Inspectors and before any appreciable advance was made, the posts of the Food Inspectors were abolished. It is advisable to employ them again, so that when the laboratory commences to work, there may be ample information ready to facilitate analysis.

Disposal of the dead.—It devolves on the sanitary staff to carry out all the sections regarding the disposal of the dead and to prohibit burial and burning in unauthorised places or in closed burial grounds. Grave-diggers or vettiyans attached to several burning and burial grounds are licensed every year. The license fee is Re. 1 per grave-digger. The department is unable to regulate the conduct and discipline of the incorrigible grave-diggers by the issue of licenses. Frequent complaints are lodged regarding the exorbitant rates demanded by these men for purposes of burial or cremation. An attempt is made during the current year to prescribe as far as practicable certain fixed rates, so that the public may not be inconvenienced. A trial is made in the Washermanpet burial and burning ground, and this has proved successful and before the termination of the current year, the system will be extended to the other burial and burning grounds within the city.

As the Otteri Hindu burial and burning ground was nearly filled up and extension for further burials was found imperative, steps were taken to acquire a portion of the land adjoining it. Most of the Hindu burial and burning grounds require a good deal of improvement such as putting up compound wall, gravelling the pathways, providing more water taps, extension of garden and sufficient lighting and the like. It is hoped that some provision will be made for carrying out the above works in the budget of next year.

During the year under report, a superfluous number of gardeners were entertained in each burial ground, although there was no garden attached to any, to speak of. During the current year the number of gardeners reduced is 17 with a saving of Rs. 141 per month.

CONSERVANCY.

The conservancy of the city continued to be under the control of the three Assistant Health Officers, each of them supervising the work in his range. The immediate supervision of the conservancy in each of the 30 divisions was under a Sanitary Inspector, assisted by a process server and 3 to 7 peons according to the requirements and extent of the division. There were 32 Sanitary Inspectors, 32 process servers and 105 Conservancy peons. These Sanitary Inspectors had also to do other work pertaining to sanitation etc.

Cleansing staff.—There were 1024 men, 110 women, and 60 boys engaged in cleansing the city. The details of the staff of coolies are given below:—

Sweeper Maistries	...	30
Street sweepers	...	308
Side cooly maistries	...	29
Side drain coolies	...	233
Side drain boys	...	4
Cess-pool boys	...	52
Silt trap coolies	...	33
Latrine men	...	101
Latrine women	...	110
Box Cartmen	...	107
Sewage barrel cartmen	...	68
Sewage hand cartmen	...	39
Reserve sweepers	...	34
Dung boys	...	4
Dung peon	...	1
Night conservancy sweepers	...	28
Hand cartmen	...	13
Total.	....	1,194

Bullock and Cart Depots.—There were six conservancy cart depots each in charge of a Superintendent. These Superintendents continued to be under the direct control of the Chief Superintendent, who is responsible to the Health Officer for the proper conduct of the depots and for the health of the conservancy bullocks under his charge. The details of carts and coolies are as follow :—

1. *For the removal of rubbish and filth*—

Rubbish cart	(single draught)	...	224
Do.	(double draught)	...	62
Trollies		...	67

2. *For the removal of filth*—

Cylindrical night-soil carts		...	63
Iron night soil carts	(single draught)	....	117
Do.	(double draught)	...	84
Lorries		....	16
Night-soil hand carts		...	9

3. *For the removal of silt*—

Box carts	...	139
Sewage barrel carts	....	17
Sewage hand carts	....	21

Details of depot staff—

Rubbish cart drivers	....	277
Trolly drivers	....	66
Night-soil cart drivers	...	266
Box cart drivers	....	151
Lorry drivers	....	15
Reserve drivers	...	36

Conservancy labour and strike.—

There was no shortage of labour during the year under report, but the coolies were discontented about their wages and struck work during February 1921, as pointed out in the previous year's report and demanded several concessions. They were however brought round by granting them increase of wages at the rate of Rs. 2 per head and supplying rice worth Rs. 4 each per mensem at four measures a rupee. This involved an extra expenditure of Rs. 62,016. Consequent on this, retrenchment was made in the budget allotments of the current year under the various items of expenditure relating to the Health Department, and the Coun was thereby enabled to avoid imposition of additional taxation. Recently when the mill hands struck work, there was a strong attempt for a sympathetic

strike by the conservancy labour. The trouble rose first in (A) Monegar Choultry Depot and thence it extended to (B) Basin Bridge and (C) Chulai Depots where the situation assumed a serious aspect. Some of the mill hands attacked the conservency coolies, causing terror amongst them. Not a cart could be sent out and there was a complete dead-lock. The only remedy left was to split up the Chulai Depot and even abandon it, if need be, which, located as it is close to the mills, was the centre of all disturbance. Chulai Depot was looked up to by other Depots as a source of inspiration, and hence adoption of effective measures to deal with the situation in Chulai Depot became imperative. The depot was therefore split up, the carts of the 14th and 15th Dns. with new staff were transferred to Basin Road Depot and the carts of the 19th and 21st Dns to the Harris Road Depot, leaving only the carts of the 16th, 17th and 18th Dns. This unexpected measure preliminary to a complete abandonment of the depot, in case of continued obstinacy, had its desired effect on the coolies, who quickly returned to duty. The strike thus collapsed and normal conditions were restored.

Cooly Lines:—No new lines were constructed during the year for want of funds, although the need for more of such lines was keenly felt, the existing accommodation being very insufficient.

Conservancy Bullocks:—The number of bullocks on hand on 1st January 1920 was 1247 as against 1202 in the previous year. Seventy one bullocks were purchased during the year making up a total of 1,318. Of these, 90 died of natural causes, 61 of infectious diseases, and 114 were condemned and sold, leaving a balance of 1,059.

Health of Bullocks:—The health condition of the cattle was on the whole fair during the year under report, but owing to the continued prevalence of infectious diseases, their condition was disturbed. There were 151 deaths during the year as against 111 in the previous year. Ninety animals died of natural causes as against 90 in the preceding year, while 61 died of infectious diseases against 21 in the previous year. The rise in deaths is due to infectious diseases, Rinderpest and Foot and Mouth diseases.

Conservancy Carts.—During the year under report, 10 rubbish carts and 5 night-soil carts were converted into single draught ones, while 5 trollies, 20 rubbish carts and 17 single draught night-soil carts were manufactured. The conversion of double draught carts into single draught ones has brought in a considerable reduction in the complement of bullocks.

Removal of Rubbish.—There is a wide latitude given to the people to throw house hold rubbish anywhere and everywhere. Rubbish is generally thrown in gutters along streets, and in and around dust bins. This is collected by the

Conservancy bullock carts which make two trips in the morning and one in the evening. The first trip of the morning is generally made to the motor tipping platforms, while the other trips are made to the places of final disposal.

Motor lorry Tipping Platforms.—To enable the rubbish carts to make two trips in the morning, motor tipping platforms are provided in areas which are remote from the incinerators or dumping grounds. During the year under review, there were seven such places and they were situated in the following places :—

Vasamode Paracherry, 9th Dn.
Andiappa Mudaly Street, 2nd Dn.
Motor Lorry Station, 13th Dn.
Naval Hospital Paracherry, 19th Dn.
Harris Road Bullock Depot, 20th Dn.
Napier Park, 23rd Dn.
Patchiappa Chetty Street, 24th Dn.

There was considerable agitation both in the press and on the platform over the insanitation due to the existence of tipping platform in Vasamode Model Paracherry. And when Dr. C. Natesa Mudaliar, Municipal Councillor brought a resolution before the Corporation Council which met on the 1st June 1920, it evoked a very animated discussion in which almost all the members demanded its immediate removal. And the following resolution was passed by the Council.—

"*That the tipping Platforms at the Vasamode paracheri should be removed immediately to a less objectionable quarter and that the construction of other tipping platforms be referred to the Health Committee.*"

But owing to financial considerations and for want of a better place, the resolution could not be given effect to, and an alternative suggestion of Mr. J. E Hensman, the Corporation Engineer, of replacing completely the bullock carts by a fleet of motor lorries and hand drawn rubbish carts, was under the consideration of the Standing Committee till the end of the year. Pending the disposal of this matter, the question of the abandonment of other platforms was in abeyance.

Motor Vehicles.—Six motor lorries and 11 Ford vans were also used for the removal of rubbish and filth. As the 11 Ford vans were worn out, they were not of any use for the conservancy work as also four of the lorries. The eleven ford vans have been sold by auction during the current year, and the work is now being satisfactorily managed with five motor lorries the others being kept as a reserve.

DISPOSAL OF RUBBISH.

Dumping.—There are two ways of finally disposing the rubbish of the city, one by incineration and the second by dumping. The more scientific way is the first and it was usual with the Corporation to incinerate as much rubbish as possible and dump the rest of it in dumping grounds, far remote from the residential quarters. For that purpose, two large incinerators and a number of small incinerators were maintained. This policy was gradually reversed during the last five years. As much of the rubbish as possible was dumped, while a small quantity was burnt at the two big incinerators, and all the small incinerators were abandoned. During the year 2 25,735 cart loads of rubbish were received at the various places of final disposal, of which only 47,092 cart loads were burnt at the rate of 129 cart loads a day or 65 cart loads at each incinerator, while 178, 643 cart loads of crude rubbish or an average of 490 cart loads a day were dumped. Besides the rubbish depots appointed by the Commissioner under Section 194 of Act IV of 1919, *viz.* Korukupet Rubbish Depot for the north range and Brick-kiln road (Ottery) rubbish depot for the central range and Rifle range depot for the south range a number of places irrespective of the distance from the residential quarters or even from the tipping platforms were utilised for dumping crude rubbish. Owing to a very limited quantity of earth available, the rubbish spread over thousands of square feet could not be daily covered with earth. As a consequence, every dumping place became a veritable place of fly-breeding and the locality concerned suffered very badly from fly-pest and horrible stench. The following resolution of Dr. C. Natesa Mudaliar on the subject was received with considerable relief by the public.—" **That in the opinion of this Council the system of dumping crude rubbish in the vicinity of human habitations to level up low-lying marshy lands should be discontinued."** The Standing Committee (Health) thereon recommended to the Corporation that "**dumping might be continued restricting it to places at safe distances from human habitations**". and this was approved by the Corporation at its meeting, held on 22nd December 1920.

As already mentioned 225,735 cart loads of rubbish were removed during the year against 2,49,995 in the previous year and 302,010 in 1919. There was a gradual and appreciable reduction in the quantity of rubbish removed. Seeing that Sanitary Inspectors had, in addition to conservancy, to perform other onerous duties, supervision was obviously lax, with the result that complete removal of rubbish was not effected, adding not a little to insanitation.

Incineration.—There are two big incinerators one at Krishnampet with three ovens capable of dealing with 200 cart loads or 100 tons of rubbish daily, and another at Basin Road with 12 ovens capable of dealing with at least 300 cart loads

or 150 tons daily, Both these incinerators have lethal chambers attached to them in which stray dogs are killed and subsequently burnt in the incinerators. During the year these incinerators were kept going just to consume these carcasses and only as much rubbish as was necessary for the purpose was alone incinerated. The surroundings of the Krishnampet Incinerator were also used as dumping ground and at the begining of the year there was a hillock of rubbish and incinerator ashes. During the year most of this huge quantity of rubbish was given away free of cost to several private persons to reclaim their bungalow compounds and tanks. Permits for the removal of 7,789 cart loads of incinerator ash were granted to private parties free of charge for purposes of reclamation.

Disposal of filth.—The two pail depots, one at Ice House Road and the other at Lang's garden, worked throughout the year.

The amount realised by the sale of manure from the trenching grounds during the year 1920–21 is Rs. 7,100 against Rs. 11,400 in the previous year.

Removal and disposal of silt, side scrapings, etc.—218,774 cart loads of silt, side scrapings, etc., were removed during the year. The silt and side scrapings so removed were used for covering rubbish at dumping grounds or for reclamation of low-lands.

Disinfection.—1,029 gallons of Sanitas Okal, 1,383 gallons of hydro-carbon, 8,629 paras of chunam were used for disinfection purposes.

Scavenging of Private Latrines.—Under Section 197 of Act IV of 1919 the Corporation undertook the conservancy of some private institutions and the amount realised thereby was Rs. 14,091-8-10 against Rs. 10,510-3-0 in the previous year.

Public Latrines.—The number of public latrines in the city during the year is 145, of which 70 are sanded ones, 45 flush-out latrines and 30 masonry. No new latrines were constructed during the year. Sand was renewed in all the sanded latrines. Whole time thoties were engaged to keep these latrines in proper order.

Prosecutions.—Section 195 not being publicly notified, no prosecutions were instituted under it. But under Section 202, 118 cases as against 98 in the previous year were filed against private scavengers for washing night-soil etc., into the public drains. The fines levied under this section are not deterrent enough to put a stop to this nuisance. Besides, prosecutions involve such a length of time and labour that the nuisance cannot be effectively checked. In this connection it would be well to bring to notice the utter inability of the Health Department in dealing with cases of nuisances

Almost all children in the city are led into the streets by their parents for calls of nature during the day, while during the night adults themselves make free use of drains and streets as latrines. There is not an open space, a gully or private corner which does not present the spectacle of a latrine. These nuisances come under the cognisance of the Police and not of the Municipal Act and therefore nothing but the employment of constables to work under the Sanitary Inspectors can mend matters. The pay of these constables may be met from the fines levied in the Court for the infringement of sanitary laws.

Paracherries.--There are about 104 paracherries in the city, some in the populous parts and others scattered in the out-skirts. Almost all of them belong to private landlords who are ever ready to collect land rent from the residents but spend almost nothing to maintain them in a sanitary condition. Notices for improvement on the landlords have resulted in every case in the issue of counter notices to the tenants for eviction. Although Section 198 of the Municipal Act requires the Commissioner of the Corporation to utilise the scavenging labour only on the public lands, the Corporation has now been forced to clean the private places also, such as paracherries, etc. The Corporation being faced with the dilemma of leaving the cherries to the tender mercies of the landlord and thus inviting epidemics, or of cleaning them at the expense of public funds has eventually chosen the latter course and it has now taken up the conservancy of these places. Efficient conservancy of these places depends considerably upon (1) good roads, (2) proper drainage and (3) latrine accommodation. Most of the paracherries have no proper roads and drains. Cess-pools are a standing menace to the health of the people of the locality. The rule of the Works Department that sewer connections could not be given to huts should be relaxed in several places. If it is thought that it is a waste of money to provide syphon connections for individual huts, washing platforms may be provided for the huts and linked to a common drain which in its turn should be connected with the street sewer. Latrine accommodation is sufficient in certain paracherries, while in others it is very badly required. During the year a special staff was employed to clean the paracherries, but as has been mentioned elsewhere, the staff having been saddled with other duties, sufficient attention could not be paid to these places—a defect since remedied by the separation of conservancy from sanitation and thereby releasing the staff to entirely devote itself to conservancy work.

The faults in the present system of conservancy are as follows:—

(1) Rubbish removal is attended with little or no inconvenience to the people, and so rubbish carts are not detested as much as the carts employed for removal of night-soil in day-time. Night-soil carts passing through public streets during the day fouling the atmosphere is abhorrent to the people.

(2) The Department itself finds it difficult to station such carts within a radius of easy reach for private scavengers to enable them to dump the collected filth.

(3) In populous and busy parts of the town the night-soil carts must inevitably be stationed in front of some house or other to the annoyance of the residents therein for some appreciable length of time.

(4) Instead of stationing the night-soil carts at certain places, to make them go through the streets, even as rubbish carts, will not give satisfaction, unless private scavengers conserve all house latrines at the time the cart marches in the street. This is not usually done. The working time of most of the private toties does not correspond to our conservancy hours, and many begin work even after the night-soil cart leaves the particular section or street, or section to which it is allotted. The cart then becomes inaccessible, night-soil is dumped in nooks and corners, on street-sides or in dustbins and in open drains.

(5) It is a common thing for people to see a night-soil cart stationed in a place for a length of time with the driver absent and with the lid of it open. Owing to the scarcity of labour, the driver, if an adult, goes to do his private scavenging work, and if a boy, (in the event of an adult not being available, boys are obliged to be engaged), goes to play. The Department is blamed for bad supervision, whereas any stringent measure results in the absence of these men, and the consequent stoppage of carts with worst results. "The horrible night-soil carts, which at present stand for hours here and there at street corners, and other places or centres convenient for the purpose, waiting for the sweepers to deposit the night-soil in them, smeared over with filth and smelling vilely, are both an eye-sore and a nuisance and a disgrace to any city with the slightest pretence to modern sanitariness and should not be tolerated." What then is our go with regard to the collection and disposal of excreta which is "a matter of life and death, and before it can be settled, the utmost skill and energy of the people, nay the representatives of the people, may be taxed." This question may be considered in any aspects sanitary, agricultural and financial, and in all of these are Municipalities interested. To remedy the evils of removal of night-soil from latrines of houses by means of the offensive cart system there must be sewerage system to flush out the night-soil without manual labour. When a proper and complete sewerage system exists, which allows of the disposal of excrementatious matter by water-carriage, the method of manual removal goes past the stage of useful discussion. But in Indian towns and villages such a system is rarely to be found.

Bombay is said to be the most sewered city in the east. It has more sewers and more houses connected to the sewer and more water-closets

than any other oriental city, and even there are thousands of houses with old privy basket system. It therefore follows that in most of the Indian cities even though there may be a water carriage system, still the dry method of removal of excreta becomes a sheer necessity. It remains then to consider what actually the best dry methods of removal of the excreta are in the east.

Of the various systems which are in vogue, wherever the water carriage system is expensive or impossible, the receptacle system of night-soil removal is the latest improvement in Municipal requirements. This system, though a costly one, is still the correct one, and may be worked in Madras on a small scale to start with, and may be extended gradually to meet the requirements of the city.

The Night Conservancy System.

This system aims at the collection and removal of night-soil during night time. Night-soil as the term implies is the soil which should be legitimately removed during the night. In less thickly populated divisions and in suburban areas where bungalows abound, this system can be put in force. For instance in those parts of the 20th, 21st, 22nd, 28th, 29th and 30th divisions of the Madras City where bungalows exist night conservancy is carried on. In these divisions there is proper provision for storing filth in suitable covered receptacles kept in screened position ready for removal between 12 midnight and 4. a. m. which can be easily reached by the night-soil carts. It may be asked why night-soil in other divisions should not be similarly removed during nights. The difficulties in the way are the situation of house latrines in the interior of the houses or buildings, the sentimental objections of the people to keep the filth collected over the night, and the fear to keep open street-side latrines for easy access. These account for the removal of night-soil during the day with all its attendant evils.

The proper working out of one or other of the systems detailed above depends to a considerable extent on the scavenger, be he or she, in public or private employ. The management and control of that difficult and obstinate class of scavengers make it almost impossible to secure success in the working of the methods enumerated. It is imperative that the scavengers should be brought under control. To achieve this object, there are two courses laid open:—

(1) It should be the concern of the Corporation to take over into their hands the system of private scavenging under Section 197 of the Act. This course would, undoubtedly, be the best, if the Corporation could command the services of the requisite number of thoties. But it is difficult to command sufficient labour, as is evidenced by the circumstance that in addition to private thoties, most of the public scavengers are also doing private scavenging to the prejudice of efficient street-cleansing. The Health Department has to put up with this state of

things as cleanliness of house latrines is as important as street cleansing, and further, under Section 177 all private latrines are under the control of the Corporation, which body is, therefore, bound by-law to secure cleanliness of all latrines. It is now high time for the Corporation to solve the private scavenging problem to their economic advantage. There are about 60,000 houses in the city and a full-time scavenger can conveniently conserve 35 houses daily. At the rate of 12 annas per house per month, which is the average amount now paid by the public, Rs. 45,000 per month can be obtained. For conserving 60,000 houses, 1,715 scavengers are required, and these if paid at the rate of Rs. 13 per month per head, Rs. 22,295 will be spent on labour and about Rs. 3,500 for supervision and contingencies, giving a surplus of Rs. 19,205 per month. For a year the total income from this source will be Rs. 2,30,460 and this amount may be spent for further improvement of public conservancy. There is no doubt that the undertaking of private scavenging by the Corporation is beset with great difficulties. They are:—

(1) It wlll be difficult to command adequate labour for the whole city.

(2) If therefore private scavenging is undertaken in respect of only some parts of the city, the situation will become hazardous, and may possibly end in a general strike throughout the city. At any rate one favourable division in the city may first be experimented with on the lines indicated, and if this is found easy and fruitful, public scavenging may be extended to other divisions. In other Corporations, Municipalities, and local boards, scavenging of houses is lucrative and is undertaken to the advantage both of the public and the public bodies.

The other course is for the Corporation to frame and enforce a section for the effective control of scavengers in the city. The scavengers should be licensed, the licenses being nominal and free for some time to come under such regulations and restrictions as the Commissioner thinks fit. Such licensing of private thoties will result in many advantages.

1. Public thoties can be warded off from private work and thereby better street conservancy can be ensured.

2. Dumping of night-soil in unauthorised places can be efficiently checked.

3. The Corporation can secure better conservancy of private latrines, and the rate-payers will be less at the mercy of that very intractable community, the Madras thoties.

4. Collection and removal of night-soil can be done in a cleanly and sanitary manner. Legislation for the control of private thoties is therefore indispensable.

If the evils of the existing system cannot be remedied by means of legislation the present system may be replaced by water carriage system. The system of removing excreta by water flow in underground drains and sewers is the best from the sanitary point of view, and it will also prove in the long run to be most economic.

One great advantage of the water carriage system is that sewage and excreta are removed immediately. Under it manual removal of filth becomes a question of the past and considerable advance is made in the mode of collection and removal of filth. The amount spent on filth carts and labour is saved to the Corporation. A simple and suitable form of water closet with automatic flush and proper supervision is practicable in the majority of houses, and it should be the aim of the Corporation to introduce on a growing scale the water closet system. However it is not possible to insist on this system in the case of every house for reasons cited below:—

1. The want of a proper and complete sewerage system.
2. The lack of copious water-supply.
3. The prohibitive cost in the case of poorer house-holds.
4. The habits and customs of the people.

In cases where the water closet system is not applicable, what is the most convenient and the least offensive system to be adopted? The system of removing excreta, liquid and solid, in air tight receptacles, and emptying in special openings morning and evening, into the main sewers commends itself. It occurs to me, therefore, that the establishment of a miniature flush-out or pail depots, in or about the places, where there are at present night-soil stands, will amply meet the situation.

Under Section 194 of the Madras City Municipal Act, the Commissioner should provide or appoint in proper and convenient situations depots and places for the temporary deposit or final disposal of rubbish, filth, etc. The public filth carts stationed at the various night-soil stands now answer the purpose of the act. We may do away with the night-soil carts altogether and in their places institute pail depots. The loaded baskets or the receptacles carried by the private scavengers may be taken to the nearest pail depot, instead of to a night-soil cart as now obtains, and there empty them. The waste thus discharged into the hopper connected with the sewer will be flushed away by a sufficient supply of a head water.

This I submit is a practicable way of dealing with the removal and disposal of the excreta, and a reference may be made to the Special Engineer, and

his advice sought for the institution of small pail depots to replace individual night-soil carts. I commend therefore the following to suit the present conditions:

1. Water closet system.
2. Temporary flush-out depots replacing night-soil carts altogether.
3. The modern receptacle system of night-soil collection and removal.
4. Night conservancy system.
5. And legislation to control thoties.

VACCINATION.

The City is divided into fifteen vaccination districts, each under a qualified Sub-Assistant Surgeon called the Medical Vaccinator. There were two special vaccinators, two female vaccinators and 31 assistant vaccinators. The female vaccinators worked in Gosha and Muhammadan quarters.

Vaccine lymph for the operation was obtained from the King Institute of Preventive Medicine, Guindy.

Total cases for the year.

The total number of vaccinations performed during the year 1920 was 25,074 (15,867, males and 9,207 females), against 32,231 of the previous year. The fall in the total number of vaccinations was due comparatively to the decrease in the number of revaccinations performed. The year was free from out-break of small-pox in an epidemic form, which generally makes a large addition to total vaccinations on account of revaccination of contacts. The number of attacks from small-pox was 315 against 1,227 in 1919. Of the total operations performed in the city, 24,272 cases were vaccinated by the Corporation staff and 802 reported by the Medical officer in charge of the Penitentiary. Of the former number 16,500 cases were primary vaccinations (17,192 in 1919) and 7,772 were re-vaccinations (14,035 in 1919). Of the total number of primary vaccinations, 15,508 were performed at the depot and 992 out-side, and of these again, 148 were domiciliary vaccinations performed on payment of fees, the remaining being cases performed in infected localities and in slum areas.

Percentage of Success.

The Assistant Health Officers and Medical Vaccinators verified the results of vaccinations performed by them in 15,647 primary cases, of which 13,372 were brought to the depot as required by the bye-law. Of the 15,647 primary cases verified, 12,353 were successful and 3,294 unsuccessful, the percentage of success being 78·9 against 95·77 during 1919, the fall in the percentage being due to the nature of lymph supplied by the King Institute. The Assistant Health-Officers verified 7,725 cases. The percentage of successes in primary vaccinations and re-vaccinations of all cases verified, including those reported by the Government Penitentiary, was 78·9 and 34·9 respectively, as against 95·77 and 46·07 in 1919.

Vaccination of Children under one year of age.

Of the total number of primary vaccinations (16,500), 14,494 were among children under one year of age, against 15,035 in the previous year. The birth rate in 1920 being higher than in 1919 and the death rate lower, a larger number of primary vaccinations ought to have been performed, whereas there is a decided fall in the number of primary vaccinations, which is evidently due to laxity of work turned out by the vaccination

staff. And it is hoped that during the current year the number of primary and revaccinations would increase. The percentage of success in the cases verified was 74·4 against 95·86 in the preceding year. Of 14,494, children vaccinated under one year of age 9,543 or 65·8 per cent. were born in Madras and 4,951 in Mofussal. The number of children under one year vaccinated was 27.9 per mille of population compared with 28·99 per mille in 1919, and the number of them successfully vaccinated per mille was 20·8 against 27·05 in 1919.

Verification of births.

The total number of births verified during the year was 15,536 against 15,016 in 1919. Of them 3,284 or 21·1 per cent. died during the year, 3,018 or 19·4 per cent. were reported to have permanently left the city (for 1919 it was 2,520) and 505 were not traceable at the addresses given in the birth counterfoils in spite of special efforts made for a closer observation of city births. Of the remaining 8,729, the number vaccinated was 7,881 or 50·7 per cent. of births verified. Vaccination was postponed in 810 cases against 720 in 1919. Of these 139 were verified by medical practitioners and 473 by medical vaccinators and 198 had temporarily left the city. In the remaining 38 cases which were pending at the end of the year, the parents were warned to have the children vaccinated without delay. From enquiries instituted to find out the vaccinal history of 1,187 children born in the city but removed out of it before being vaccinated, it transpired that only 85 were reported to have been vaccinated outside the city.

Hospital births.

Hospital births numbering 4,834 were verified during the year. Of these 679 or 14·0 per cent. were reported to have died, 948 or 19·6 per cent. were reported to have been permanently removed from the city and 1,433 were not traceable at the addresses given in the birth counterfoils, leaving 1,774 available for vaccination. Of these 1,662 were vaccinated during the year. Vaccination was postponed on medical certificates in 22 cases, 44 children were found sick by the medical staff and 40 had temporarily left the city. Vaccination was pending in six cases. As usual the number of untraced cases was large which in many instances was due to insufficient and incorrect addresses, but with the additional headings opened on the birth counterfoils in 1916, a larger number of them were traced, the percentage of untraced in 1920 being 29·6 against 27·24 in 1919.

The statement on page 138 furnishes information as to the number of births verified by the vaccination staff during the year 1920 and the number of children vaccinated before they attained the age of one year.

Analysis of the total accoiding to the race.

Out of 25,074 cases vaccinated, 1,099 were Europeans and Anglo-Indians, 20,345 Hindus, 2,151 Mohammadans, 1,342 Indian Christians and 137 other castes. The vaccination of other castes was proportionately larger than that of any other class, the number

vaccinated among them being 7·7 per cent. of their population; whereas the percentage among Europeans and Anglo-Indians, Hindus, Mohammadans and Indian Christians were 7·6, 4·9, 3.7 and 4·9 respectively.

Number of smallpox cases treated in the two Infectious diseases Hospitals.

Three hundred and fifteen cases of small-pox were reported during the year as against 1227 cases in the previous year. Of these 185 cases were treated in the two Infectious Diseases Hospitals of which 27 cases proved fatal. 110 cases were treated in the Infectious Diseases Hospital, Royapuram and 75 in the Isolation Hospital, Krishnampet.

Vaccinal condition of small-pox.

The amount of protection against small-pox conferred by vaccination is well illustrated in the table below. Of 240 attacks amongst the vaccinated, 71 or 29·58 per cent. died, whereas there were 65 attacks and 38 deaths amongst the unvaccinated, the percentage of deaths being 58·46.

Age Periods.	Vaccinated.		Unvaccinated.	
	Attacks.	Deaths.	Attacks	Deaths.
Under one year	12	9	11	9
One and under 5 years	38	22	16	12
5 and under 10 do.	18	4	9	3
10 and under 15 do.	29	4	10	4
15 and under 20 do.	36	4	...	....
20 and under 25 do.	25	7	7	3
25 years and above	82	21	12	7
Total ...	240	71	65	38

Prosecution.

There was only one case of prosecution for failing to get the child vaccinated, but the case was discharged as the parent got his child vaccinated immediately after prosecution.

Fees.

The fees for primary vaccinations at private residences under bye-law No. 11, framed under Section 349 (26) of the Madras City Municipal Act IV of 1919 and for vaccination certificates issued amounted to Rs. 265–7–0 which was credited to the Corporation.

Cost of vaccination.

The cost of registration and vaccination during the year was Rs. 34,547-12-1. Debiting half this amount to vaccination, the cost amounted to Rs. 17,273-14-0 and deducting from this amount the fees referred to in the previous paragraph, the expenditure in vaccination was Rs. 17,008-7-0 and the net cost of each successful vaccination was Re. 1-3-7. The increased cost was due to the fall in the total number of vaccinations in the year under report and to the decrease in the percentage of success amongst the vaccinated cases due chiefly to the nature of lymph supplied by the King Institute, Guindy.

VITAL STATISTICS.

Area of the City	.... 27·6 sq. miles or 17,626 acres.
Population (Census of 1911)	... 5, 18, 660.
Average density	... 29·4 per acre.
Density of the old 7th, 8th and 9th Divisions or present 10, 11, 12, 13, 14 & 15 Divisions	... 132·6 per acre.
Inhabited houses	... 64, 619.
Number of persons per house ...	... 8·03.
Total births registered in 1920 excluding still births	.... 21,396 against 18,936 in 1919.
Still births	.... 1,172 against 837 in 1919.
Illegitimate births	.... 712 against 667 in 1919.
Birth-rate	... 41·3 against 36·5 in 1919.
Total deaths registered in 1920 ...	.... 21,418 against 21,197 in 1919.
Death rate	.... 41·3 against 52·4 in 1919.
Infantile mortality	... 5,976 against 6,230 in 1919.
Infantile mortality rate	.... 279·3 against 329·0 in 1919.
Estimated population for the middle of the year 1920	.... 527,275.
Death rate from Infectious diseases on census population	... 17·6.
Death rate on estimated population ...	... 40·6

VITAL STATISTICS.

Table A on page 132 shows the birth and death statistics for 12 years since 1909.

The climatic conditions of the city during the year 1920 were on the whole normal. The total rainfall during the year was 63·89 inches against 50·78 inches in 1919 and 75·00 in 1918.

Climate.

Table B on page 133 shows the quarterly rainfall in the city since 1915.

Registration of births and deaths.

Fifteen Medical registrars with 31 Assistants were in charge of registration of births and deaths in the city.

Births.

The number of births registered during the year 1920, exclusive of still. births was 21,396 being 2,460 more than in the previous year. The ratio calculated on the census population of 1911 was 41·3 per mille, against 36·5 in 1919 and 38·4 in 1918. The birth rate calculated on the population estimated for the middle of the year 1920 was 40·6

Birth-rate by races.

Table C on page 133 shows birth-rate by races and Table D on page 134 shows the rate amongst principal sub-divisions of the Hindu community for two years. As in the last year the Muhammadan community returned the highest birth-rate of 42·6 and the European community the lowest 20·5.

Births by months.

Table E on page 134 shows the number of births in each month during 1919 and 1920. The largest number of births was recorded in September and next in August and October.

Births by sex.

Out of 21,396 births recorded during the year, the number of males was 11,063 and females 10,333.

Illegitimate births.

Seven hundred and twelve illegitimate births were registered during the year against 667 in 1919 and 817 in 1918.

Still-births.

There were 1,172 still-births during 1920 against 837 in 1919 and 834 in1918.

Deaths.

The number of deaths registered during the year exclusive of still-births was 21,418 against 27,187 in the previous year. The mean for the previous five years was 22,985.

The ratio of deaths calculated on the census population of 1911 was 41·3 per mille against 52·4 in the previous year and 60·3 in 1918 and the mean ratio for the previous five years was 44·3. The death-rate calculated on estimated population was 40·6 per mille.

Sex. Deaths among males numbered 10,910, and among females 10,508 the proportion being 104 males to every 100 females.

Class. The number of deaths registered among Europeans was 51, Anglo-Indians 312, Indian Christians 963, Hindus 17,412, Muhammadans 2,669 and others 11, the ratios being 12·2, 30·2, 35·2, 41·9, 45·1, and 6·2, respectively.

Age. Mortality among infants under one year of age was as usual the highest, viz., 5,976; next comes 3,820 deaths among adults of 60 years and upwards. Next comes age 1 to 5 years with 3,654 deaths. There is a sudden drop thereafter in the age periods 20 to 30, 30 to 40, 40 to 50, and 50 to 60 with 1,784, 1,569, 1,310, 1,280 deaths respectively. Then comes the age period 5 to 10 with 922 deaths, then the age period 15 to 20 with 616 and lastly the age period 10 to 15 with 487 deaths.

From table H on page 137 it will be seen that as many as 2381 or 39·84 per cent of the total number of infants died before they attained the age of one month. Of these 2381, as many as 1317 or 55·23 per cent. were cases of premature birth and debility *i.e.*, 2[illegible]·4 per cent. of the total infants under one year died from this cause before they attained the age of one month.

Child-welfare work. A full report on the Child Welfare work for 15 months ending with December 1920 will be found on pages 78 or 96.

Causes of Mortality–Infectious Diseases.

Malaria. Malaria caused 2·6 per cent. of the total deaths as against 2·7 per cent. for 1919 and 2·8 per cent. for 1918 or expressed in ratio per mille 1·1, 1·2 and 1·7 respectively. Annual form No. X on page 108 shows that 560 persons died of this cause against 736 in 1919.

Enteric Fever. There were 66 deaths from enteric fever during the year giving a ratio of 0·1 per mille as in the year 1919 against 0·09 in 1918. The mean ratio for the previous 5 years is 0·1. The number of deaths mfro this disease returned for 12 years is given in the table below:—

1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
41	42	52	42	51	66	75	49	47	45	52	66

Kala-Azar. Twenty-two deaths were registered from this cause the corresponding number in 1919 and 1918 being 41 and 19 respectively.

Cholera.

Fifty-seven cases were reported during the year of which 22 or 38·6 per cent. proved fatal, against 998 attacks and 642 deaths or 64·3 per cent in the previous year, the ratio being 0·04 per mille as against 1·2 per mille in 1919. The mean ratio for the previous 5 years is 0·5.

Incidence.:—

Cholera by sex and age.

1920	Under 1 year of age.		1 to 4		5 to 9		10 to 14		15 to 19		20 to 29		30 to 39		40 to 49		50 to 59		60 and upwards.		Grand total of Males & Females.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M	F.	M.	F.	M.	F.	M.	F.	
Cholera. ...	1	...	1	...	2	1	1	...	1	...	1	3	3	1	3	1	...	1	2	...	22

Small-pox.

Small-pox was prevalent in the city throughout the year in a sporadic form. The number of attacks during the year was 315 of which 109 or 34·6 per cent. proved fatal. The annual death-rate was 0.2 per mille against 1·2 per mille in 1919. The mean ratio for the previous 5 years was 0·6. Suitable preventive measures were taken and the disease was greatly kept under control.

Measles.

There were 41 deaths during the year. The percentage calculated on the total deaths is 0·14 per cent. or 0·08 per mille. The mean average for the previous five years is 0·3.

Influenza.

The total number of deaths registered under Influenza was 250 for the year against 1,303 in 1919, or 0.5 per mille.

Plague.

There were in all 11 attacks and 8 deaths from imported cases of plague during the year against 15 attacks and 14 deaths in 1919.

The administration of Plague was restricted mainly to

1. rat destruction and
2. administration of the Port Health Officer.

The Standing Committee (Health) at its meeting held on 23rd April 1920 sanctioned the abolition of the Plague staff totally as it was considered that the measures adopted to reduce the number of rats in any particular locality were abso-

lutely futile. The Plague staff was accordingly disbanded on 8th May 1920. The number of rats sent to the Incinerator, Bombay Bacteriological Laboratory and Plague Prevention Inquiry, Poona during the period from 1st January 1920 to 7th May 1920 was 46,985. Thus the total number of rats destroyed from the beginning of the operations came up to 26,23,486, of these 5,971 were caught alive. Out of 5,971 caught alive 774 were sent to Bacteriological Laboratory Bombay and to the Plague Prevention Inquiry, Poona for examination.

The Port Health Officer reports as follows:—

Incoming Vessels.—495 vessels arrived here during the year from infected parts with 53,471 crews and 92,496 passengers against 326 vessels of the previous year with 31,863 crews and 73,574 passengers.

Out-going Vessels.—278 vessels with 22,618 crews and 54,500 passengers were inspected and granted bills of health during the year against 287 vessels with 21,943 crews and 47,696 passengers of the previous year.

Epidemic and Infectious Diseases.—11 cases of chicken-pox with 18 contacts, one case of small-pox and 2 cases of cholera were found in steamers that entered the harbour during the year under report. All these cases were sent to the Infectious Diseases Hospitals at Royapuram and Krishnampet for treatment and observation. The necessary precautions were taken to disinfect the cabins and decks occupied by them.

The disinfection of bedding and clothing of deck passengers and crew landing and embarking from here is continued. The disinfection shed is in charge of a sub-assistant surgeon and a nurse is employed for examining female passengers.

Rats on Steamers.—No unusual mortality was found on any of the vessels that entered and left the harbour during the year under report.

The Clayton's apparatus was used once during the year on 24th July 1920 for disinfecting the S.S. "Triginna" which landed a case of Typhus fever in Calcutta previous to arrival here.

Diarrhoea and Dysentery.

4,671, deaths were registered from these causes. This represents a death-rate of 9.0 per mille against 11.3 in 1919 and 10·7 in 1918 or 21·8 to the total deaths and 21·5 per cent. in 1919 and 17·7 per cent in 1918. The largest number of deaths were recorded in January, next in December, February, March and November. The mean ratio for the previous 5 years was 9·0.

General Respiratory diseases excluding Tubercle of the lung.

3, 431 deaths were recorded from this cause or 408 deaths less than in the previous year. The ratio is 6·6 per mille against 7·4 in 1919 and 10·6 in 1918. The mean ratio for the previous five years was 6·9.

Tuberculosis including Tubercle of the lung.

997 deaths were registered under this head, a decrease of 312 deaths to the previous year. The ratio is 1·9 per mille.

Diseases of the nervous system.

2182 of 10·19 per cent. to the total deaths were registered under the heading against 3382 or 12·4 per cent. in the previous year. Of these 1253 deaths were recorded among infants under one year of age against 1419 in the previous year who were reported to have died of 'convulsions.'

Certified Deaths.

The number of deaths certified by qualified medical men was 2327 of 10·86 per cent of the total number of deaths in the city. Of these 416 or 1·94 per cent, were certified by private medical practitioners and 1911 or 8·92 per cent. by public hospitals.

Extracts from Birth and Death Registers.

Three-hundred and twelve applications were received during the year for extracts of entries from the birth registers and 432 from the death registers. Out of these, the number of birth extracts granted was 104 and of death extracts 332. In 129 cases extracts were not granted as the parties failed to pay the fees. In 89 cases entries could not be found and the parties were informed accordingly. The fees collected during the year for such extracts amounted to Rs. 1,035.

During the year 16,860 bodies were buried and 4,558 were burnt. Lands for the erection of tombs were sold to 195 applicants and the amount realised by such sale was Rs. 921–14–0.

Report on the working of the Bauliah Naidu Dispensary, Vepery for the year 1920.

Medical Officer in charge:—M. R. Ry. P. D. Rathnaswami Pillai, L. M. P.

This dispensary is located in a central place most convenient to the residents of Purasawalkam, Vepery and Choolai.

The establishment maintained to work this dispensary consists of:—

- One Sub-Assistant Surgeon.
- Two compounders.
- One Male ward attendant.
- One Female ward attendant.
- One peon.
- One sweeper

One Sub-Assistant surgeon, one compounder and three peons were reduced since 1st April 1920.

The total number of patients treated during the year was 40,401 with an average daily attendance of 221·52 as against 48,769 and 254·67 of the previous year. The maximum number of patients treated on any one day (24–10–20, during the year was 295. Of these the number of surgical cases (minor operations) attended to was 1,361.

Report on the working of the Chintadripet Dispensary for the year 1920.

Medical Officer in charge.—M. R. Ry. E. Vijiam, L. M. P.

This is situated in a convenient centre at Chintadripet and affords immense relief to the residents of the locality.

This institution is worked with the following staff:—

One Sub-Assistant Surgeon.
Three compounders.
One nurse.
One male ward attendant.
One female ward attendant.
One peon.
One sweeper.

The total number of patients treated and the daily average of attendance was 36,468 and 254·57 as against 36,166 and 251·67 of the previous year. The number of minor operations performed was 1083 as against 1262 in 1919.

The compounding and the female dressing rooms are ill-ventilated and the building is in bad need of repairs.

Report on the working of the Washermanpet Dispensary, Washermanpet for the year 1920.

Medical Officer-in-charge.—M. R. Ry. R. Ramanjulu, L. M. P.

This dispensary is situated in a central place in Thiruvathiyur High Road in Washermanpet within easy access to the public in that part of the city.

The institution is run with the following establishment:—

One Sub-Assistant Surgeon.
Three compounders.
One male ward attendant.
One female ward attendant.
One peon.
One sweeper.

The total number treated and the daily average was 34,587 and 231·99 as against 31,640 and 224·78 in 1919. The maximum number of patients treated on any one day (5–12–20) was 310. The number of minor operations performed was 1,111.

The building being rather insufficient to meet the increased need of the patients, an extension on the back side of the main building is necessary. An additional peon may be entertained to regulate the rush of patients.

Report on the working of the Triplicane Dispensary for the year 1920.

Medical Officer-in-charge:—M. R. Ry. T. Jayaram Chetti, L.M.P.

This dispensary is located in a rented building in Triplicane High Road next to the Post Office.

The following staff form the establishment of this institution:—

One Sub-Assistant Surgeon.
One compounder.
One male ward attendant.
One female ward attendant.
One peon.

The total number of new cases treated was 16,050 as against 1,343 in 1919 and the number of minor operations performed is 784.

The accommodation is not sufficient to meet the requirements of the increasing number of patients. The services of an additional compounder is also necessary.

Report on the working of the Kilpauk Dispensary for the year 1920.

Medical Officer-in-charge:—M. R. Ry. C. Govindan, L. M. P.

This dispensary is located in the vaccination depot in Poonamallee High Road at the corner of the Spur Tank.

The establishment maintained to work this dispensary is as follows:—

One Sub-Assistant Surgeon.
One compounder.
One male ward attendant.
One female ward attendant.
One peon.

The total number of patients treated and the daily average attendance was 8 586 and 59·81 as compared with 6,521 and 32·90 in 1919. 192 minor operations were performed during the year.

The accommodation is insufficient. Two dressing rooms for both the sexes are quite essential and have to be put up; and slight repairs have to be attended to.

Report on the working of the Georgetown Dispensary for the year 1920.

Medical Officer-in-charge:—M. R. Ry. K. S. Anantha Iyer, L. M. P.

The dispensary is located on the 1st floor of a rented building at No. 94, Audiappa Naick Street next to the Progressive Union School in the heart of the town. But for the inconvenience of the patients having to get up the stairs, the building is otherwise satisfactory.

With the addition of another compounder on 5-10-1920 the staff of this dispensary is as follows:—

One Sub-Assistant Surgeon.
Two compounders.
One male ward attendant.
One female ward attendant.
One peon.

The number of patients admitted during the year was 28,383 and the total number treated was 89,887 with an average daily attendance of 245·60. This dispensary was started only in the latter part of 1919 and during the year the attendance has gradually increased. The maximum number of cases treated on any single day (2-12-1920) was 543. The minor operations performed was 540.

The employment of a full time sweeper is necessary.

Report on the working of the Isolation Hospital, Krishnampet for the year 1920.

Medical Officer-in-charge:—M.R.Ry. A. M. Vaiyapuri Mudaliar, L. M P.

This hospital is situated at Krishnampet free from the buss of town. It consists of five main wards providing separate accommodation for different infectious diseases fitted up with electric light and telephone. A motor ambulance car is stationed here and is available day and night for services within the city for the removal of patients suffering from infectious disease to this as well as to the other hospital at Royapuram.

The hospital is manned with the following establishment:—

One Sub-Assistant Surgeon.

Two nurses.

One male ward attendant.

Two female ward attendants.

One male Thoty.

Three female thoties.

One gardener.

Two cooks.

One Peon.

One compounder.

One Ambulance car driver.

One Ambulance car cleaner.

During the year under report 296 patients and 94 contacts were admitted. It may be stated here that this hospital admits and looks after not only patients suffering from infectious diseases but also their contacts, who are detained in the separate wards till the incubation period is over. Plague patients are generally treated in this institution.

Thanks are due to M. R. Ry. S. V. Ramaswami Mudaliar and Mrs. Beasant for their contribution of Times' History and Encyclopaedia of the great war from its commencement and the daily Edition of "New India" for the use of the patients.

Statement showing the total number of cases treated in the Isolation Hospital during the year 1920.

Disease.	No. admitted.	No. of deaths.	Mortality rate
Cholera	32	7	21·8
Small-Pox	75	9	12·0
Chicken-Pox	74	nil	
Measles	63	nil	
Plague	8	6	75·0
Influenza	17	1	5·8
Dysentery	3	nil	
Diarrhoea	4	nil	
Pneumonia	2	2	
Mumps	3	nil	
Diphtheria	3	1	33·3
Syphilis	1	nil	
Pyrexia of uncertain origin ...	4	1	25·0
Other causes	7	nil	
Total.	296	27	9·1

Report on the working of the Infectious Diseases Hospital, Royapuram, during the year 1920.

Medical Officer in charge:—Mr. J. Titus, L.M.P.

This hospital is situated in the Old Jail Road, Georgetown, and is quite similar to the Isolation Hospital, Krishnampet.

The staff of this hospital consists of:—

- One Sub-Assistant Surgeon.
- One compounder.
- Two Indian nurses.
- Two male ward attendants.
- Two female ward attendants.
- Two male sweepers.
- Two female sweepers.
- Two peons.
- Two cooks.
- One dhoby.

The two nurses are now living within the hospital premises.

The total number of patients treated during the year was 235.

Cholera	....	....	17
Small-pox	...	...	110
Chicken-pox	...	...	36
Measles	....	...	20
Influenza	...	...	9
Pneumonia	...	...	4
Mumps	....	...	6
Other causes	...	...	33
	Total	...	235

Improvements to the hospital were effected during the year and during the current year it is hoped that the installation of electric lights and water taps will be complete. The ambulance car serves this institution as well.

A brief summary of the work done by the various institutions and organisations as reported by them, referred to in the list attached to G.O. No. 653 P. Mis., dated 10th June 1921.

People's Service League.—This organisation affords medical relief in slum areas, viz., Cox Cheri, Chintadripet, (2) Kallarai Cheri, Periamet (3) Vasamodu Cheri, Broadway, (4) Adaikalapuram, (Checkumodu Cheri) Georgetown and Mackay's gardens. A "Cheri vigilance Committee" is formed and the work of the committee is (1) to improve the sanitary condition of all these cheries by delivering lectures in Tamil on cleanliness and allied subjects and (2) to awaken the sanitary conscience of the residents by means of magic lantern lectures. The league has helped in the formation of co-operative societies in these cheries. Temperance work is another of the activities of the league. The league was permitted the use of one of the Corporation model schools for holding night schools in which health propaganda forms a large and important part.

North Madras Branch Health Association.—This association manages a 'creche' with the help of voluntary workers who mostly belong to the staff of the nurses of the Raja Sir Ramaswamy Mudaliar's Lying-in-hospital. It has taken some part through its Secretary in propaganda work by lectures on maternity and child welfare. During the year that the Day nursery has been in existence a sum of Rs. 500 was collected as donations and Rs. 1,300 as subscriptions. The association has about 30 members on its rolls. Compared with the magnitude of the task, the work of the association does not touch the fringe of the problem. The total number of children taken care of during the year under report is 98 and the average daily attendance at the day nursery is eight. Five children were taken care of for over six months; 15 for periods ranging from three to six months; 27 for periods ranging from one to three months and 51 for less than a month. There was one death among children taken care of, "the child, a marasmic infant suffering from rickets."

The Triplicane Sociological Brotherhood.—This organisation has appointed a sanitation committee which visits the streets and lanes of Triplicane pointing out to the residents therein the necessity of cleanliness and care in matters of sanitation and bringing to the notice of the Municipal authorities the various needs of the people of the locality. The needs of the residents of Parthasarathy Kuppam were specially looked after.

Rao Bahadur Cunnan Chettiar's Feeding Home For Infants.—This institution is situated in South Mada Street, Triplicane and supplies milk to all deserving and needy poor infants of 9 months and below, irrespective of caste or creed.

St. John's Ambulance Association.—The various functions of this association are (1) rendering first aid during the Park Fair etc., (2) inspection of cheries of Madras and reporting to the municipal authorities regarding their need (3) distribution of health pamphlets in vernaculars, (4) delivering health lectures, (5) training men in first aid, home-nursing and home hygiene who will be of great help to the community at large in promoting their health and welfare. About 3,000 persons have been so trained. It maintains a motor ambulance for the use, of the public and an ambulance corps. The Corporation pays an annual subsidy of Rs. 100.

United Free Church Mission Rainy Hospital.—This institution attends to pregnant women and treatment of puerperal septic cases seeking hospital treatment.

Sri Kannyaka Parameswari Devasthanam Managing Committee.—This organisation maintains a free Ayurvedic dispensary in Georgetown which is resorted to by the Hindu population of that part of the city. The total number of patients treated during the year was 28,925.

Chengalraya Naicker's Technical and Industrial Institute and Orphanage, Vepery.—This institution maintains a free Ayurvedic dispensary. The total number of visits paid by patients during the year was 153.

Calavala Cunnan Chettiar's Free Ayurvedic Dispensary.—This is an Ayurvedic dispensary at Triplicane rendering medical aid to out-patients of all classes. The total number of visits by patients during the year was 140,254 with a daily average attendance of 416. The annual expenditure incurred was Rs. 8,697-11-1. The Madras Corporation contributes Rs 100 per annum since 1920.

The Ramakrishna Mission Students Home, Mylapore.—In this home 100 poor boys studying in the various colleges of the Madras city receive free boarding and lodging. Leading doctors give free medical relief to the students and also lecture to them on health and sanitary subjects.

Madras Society for the Protection of Children.—The objects of the society are :—

1. To prevent the public and private wrongs of children and the corruption of their morals.

2. To take action for the enforcement of the laws for their protection and when desirable to have such laws amended.

3. To take such steps as may be necessary for the rescue of destitute children.

4. To provide and maintain an organisation for these objects.

5. To do all other such lawful things as are incidental or conducive to the attainment of the above objects.

6. It is also one of the aims of the society by various means such as lectures and distribution of literature to disseminate right views in regard to the training and up-bringing of children and to create and direct public opinion in favour of the rational and humane treatment of children.

99 boys and 5 girls were rescued during the year, through various agencies in the Presidency. These represent all castes.

The strength of the society stood at 73 as against 70 in 1919. The amount of subscriptions and donations received from the public during the year was Rs. 2,200-8-0 as against Rs. 2 559-3-6 during 1919. The amount expended during the year was Rs. 5,720-11-11 as against Rs. 5,526-4-9 during 1919 The balance at the end of the year was Rs. 36-12-5 as against Rs. 791-7-6 at the end of 1919. The number of cases rescued during the year was the same as in the previous year. The number of children in the society's home at the end of the year was forty-seven same as at the end of 1919.

Indian Christian Temperance Association.—The work of this association is purely of an educative nature *i. e.*, delivering lectures and distributing leaflets on Temperance. Lectures on health and sanitation also were given by prominent gentlemen in the city at important centres.

Friend-in-need Society.—The object of the society is to render both indoor and out-door relief to the deserving poor and suppression of mendicity amongst Europeans and Eurasian Christians of every denomination. Poor and needy, aged and infirm, are given lodging and clothing and supplied with all necessaries.

Poor Schools Society.—The aim of this society is to bring to the notice of the Corporation authorities the insanitary condition of Alwarpet, Bhimanpet and get them rectified (2) running night schools and delivering lectures on health and sanitation.

Madras Depressed Classes Mission Society.—The workers and friends of this society go round visiting the cheries where they give advice to the poor and ignorant people about cleanliness, personal hygiene, cause of disease and distribution of simple remedies in cases of slight ailments and sending more serious cases to hospitals. They also from time to time bring to the notice of the Corporation sanitary authorities the sanitary needs in particular localities and co-operate with them in remedying such defects.

San Thome Dispensary.—This dispensary affords medical relief to the general public and also the several charitable institutions in and around Mylapore without distinction of creed, caste or nationality. It has been in existence for the past 47 years doing this relief work. The Sub-assistant surgeon visits poor patients

at the homes of the sick gratis, when he finds they are poor and treats them. During the year the total number of cases treated was 11,202 with an average daily attendance of 64·78. 582 minor operations were performed during the year. The Sub-Assistant Surgeon with a qualified compounder runs the dispensary.

Raja Sir Ramaswamy Mudaliar's Lying-in-Hospital, Madras.—The Superintendent has kindly forwarded a copy of the Annual Clinical Report for the year 1920. The report is very interesting and comprises many statistical details presented in tabular forms.

The number of cases treated during the year was as follows:—

Obstetric.

Remained from previous year	... ...	30
Delivered in hospital (including abortions)	...	1,589
Delivered on the way to hospital ...	...	7
Total	....	1,626

Diseases of pregnancy and Gynaccological cases.

Remained from previous year	...	10
Admitted	....	552
Total	...	562
Grand Total	....	2,188

"**Madras and Chingleput Districf Boy Scouts Association.**"—The various troops attached to the Association, rendered first aid and took interest in studying and helping to improve the general well-being of the inhabitants of cheries and other slum areas. They also did antimalaria work on a small scale, as distributing quinine and filling up low grounds and petrolising small pools. They do their bit in putting down fires before the arrival of the fire-brigade in a few instances.

During the Mylapore festivals, and on such other occasions, they restored straying children to their parents, regulated the crowd, provided water for drinking and prevented the committing of nuisance in thoroughfares. The Association expresses its willingness to co-operate with the Corporation authorities quite unobstrusively, as far as possible.

Report of the Special Malaria Officer for 1920.

During the year under report the Special Malaria Office was continued as a separate department under the Health Officer. The establishment maintained was a minimum just enough to keep on with the generally approved measures for mosquito suppression.

One hundred and seventy-six children under the years of 2 and 10 were examined for enlarged spleen and 176 blood smears were examined. 11·36 percent were found to have enlarged spleen and only one slide showed Malaria Parasite. 378 smears from patients attending the dispensaries of the Corporation with fever were examined and 28 or 7.4 per cent. showed Malaria Parasites.

Anti Malaria Works.

Cleaning of tanks and ponds:—1,113 tanks in all were cleaned and recleaned during the year. Several of them required cleaning four to seven times in the year.

Petrolising:—5,900 pits and cesspools, 141 tanks, 1,580 ponds, 16 lowlands and 59 wells were petrolised every week, in addition to numerous other small pools and puddles that generally form, soon after the rains in several low-lying tracts and tank beds. Portions of Cooum and Buckingham canal were also included in the sphere of our operations.

Clearing Rank Vegetation:—1,827,850 sq. ft. of ground in Tondiarpet 600,100 sq. ft. of ground in Purasawalkam were cleared of all rank vegetation. In addition 362,960, sq. ft. of ground in Tondiarpet, 35,600 sq. ft. of ground in Perambur and 17,152 sq. ft. of ground in Purasawalkam were cleared of prickly pear during the year by this Department.

Larvicidal fish:—Wells where fish were introduced but had disappeared were re-stocked with them. 4,148 wells were examined to ascertain whether fish once introduced were living in them and in 2,496 or 57·7 per cent. the wells were found to be fishless, *Vide* Statement on Page 60.

Reclamation:—Table on page 61 shows the amount of work done during the year. In this connection I may here state that much work could not be done in this direction as motor lorries were becoming sick very often and not sent continuously for Malarial work throughout the year.

RANDOM SAMPLING.

Division.	Place.	No. examined for enlarged spleen.	No. with enlarged spleen.	Percentage.	No. of blood smears taken.	No. infected.	Percentage.	Percentage in 1919.
16	Chaklipalayam.	31			31			
18	Gramam Paracheri	31	1	3·2	31	1	3·2	
18	Otteri Ubbrapalayam. ...	29			29			
18	Vettiyancheri.	24			24			
21	Semmenchari	32	1	3·1	32			
21	Swami Naicken Paracheri .	29			29			
	Total.	176	2	11·36	176	1		

DISPENSARY STATISTICS.

Dispensary.	Total No. of slides examined.	Number infected	Percentage.	Percentage in 1919.
Washermenpet Dispensary.	57	6	10·5	
George Town Dispensary.	47	6	12·7	
Baliah Naidu Dispensary.	11	1	9·9	
Kilpauk Dispensary.	120	6	5·0	
Chintadripet Dispensary.	115	9	7·8	
Triplicane Dispensary.	28	....	...	
Total.	378	28	7·4	

STATEMENT OF WELLS INSPECTED DURING THE YEAR 1920.

Division.	No. of wells inspected in open yard.	No. of wells inspected under covered roof.	Total No. of wells examined.	No. of wells in which fish were alive.	Percentage.	No. of wells in which fish were introduced in their absence.	Percentage.	Remarks.
10	247	126	373	121	32·43	252	67·56	4 wells were cleaned.
11	348	219	567	271	47 79	296	52·2	29 ... ...
12	428	176	604	288	47·68	316	52·3	70 ... ...
13	382	177	559	263	47·04	296	52·9	60 ... ...
14	139	69	208	106	50·9	102	49·0	17 ... ...
15	241	170	411	140	34·06	271	65·9	35 ... ...
17	226	55	281	146	51·9	135	48·04	57 ....
18	265	31	296	55	18·58	241	81·4	88 ... ...
19	137	30	167	41	24 55	126	75·4	45 ... ...
20	198	23	221	45	20·36	176	79·6	52 ... ...
21	163	2	165	103	62·4	62	37·5	81 ... ...
22	294	2	296	73	24·6	223	75·3	128 ... ...
Total	3068	1080	4148	1652	39·8	2496	57·7	666 wells were cleaned.

RECLAMATION WORK DONE DURING THE YEAR 1920.

Serial No.	Division.	Name of the owner	Nature of place.
1	2	Corporation of Madras.	Lowland.
2	4	Mr. Muthiya Chetty.	Tank.
3	4	Corporation of Madras.	Pits.
4	4	Messrs. Massey & Co., ...	Lowland.
5	4	Do	Tank.
6	12	Government.	Old moat.
7	12	Mr. Athimoola Mudaly.	Pit.
8	12	Mr. Natesa Pillai.	Well.
9	12	Corporation of Madras.	Pit.
10	16.A.	Mr. P. Thanikachala Mudali.	Pits.
11	16.A.	Mr. T. Ramaniah Chetty.	Tank.
12	16.A	Do	do.
13	16.B.	Syed Hasan Ali.	Lowland.
14	17	Mr. Narayana Chetty.	Tank.
15	17	Angalammen Koil.	do
16	20	Government Police Lines.	Lowland.
17	21	Rev. W. Meston, M. A.	Ponds.
18	21	Mr. S. N. Bharati.	Lowland.
19	22.A.	Mr. Nowroji	Tank.
20	22.A.	The Hon'ble Mr. C G. Todhunter. ...	Cistern.
21	28	Mr. R. Madhava Rao.	Pits.
22	29	Mr. M. A. Thirunarayana Achariar.	Lowland.
23	29	Mr. L. S. Veeraraghava Aiyer.	do
24	29	Dr N. C. Nanjunda Rao.	Pits.

STATEMENT OF EXPENDITURE INCURRED DURING THE YEAR 1920.

Month.	Establishment.						Amount spent for filling in connection with Anti-malarial reclamation work.			Oiling, cleaning, fishermen, bush cutting & purchase of solar oil.			Stationery printing & Laboratory equipments			Contingencies, rent of buildings etc.			Law charges.			Total.			Total in 1919.		
	Investigation prevention & Treatment staff.			Anti Malarial drainage works.																							
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A	P	Rs.	A.	P.	Rs	A.	P.	Rs.	A.	P	Rs.	A.	P.	Rs	A.	P.
January	1,267	2	4	284	15	2	254	2	7	877	1	11										2,683	6	0	4,969	0	4
February	1,194	8	6	261	12	7	246	9	2	893	1	1				9	1	2				2,605	0	6	4,783	3	4
March	1,228	15	5	297	14	6	278	0	8	867	5	6	30	2	0	1,691	15	4				4,394	5	5	6,655	1	1
April	829	3	7	97	8	0	253	11	1	949	9	7				986	6	0				3116	6	3	4 209	6	10
May	384	0	0				251	4	3	901	14	10	41	2	5				1	0	0	1,579	5	6	3,532	14	6
June	376	8	3	106	0	0	470	9	5	937	14	1										1890	15	9	3,596	5	9
July	375	7	9	99	6	6	309	7	6	1 040	15	10										1825	5	7	4,386	15	11
August	376	0	0				405	11	4	1,068	6	5				88	5	0				1938	6	9	4,137	2	5
September	457	12	5	8	1	0	310	10	3	1,165	11	0				633	3	1				2575	5	9	6,344	0	1
October	376	0	0	39	4	6	294	2	3	1,163	2	0										1872	8	9	3,761	7	11
November	382	12	5	79	2	6	306	5	1	1,072	8	9				97	11	0				1938	7	9	3,165	5	0
December	383	0	0	73	3	9	306	15	0	1,074	7	10				37	14	0				1875	8	7	5,875	3	7
Total.	7,631	6	8	1,347	4	6	3,687	8	7	12,012	2	10	71	4	5	3,544	7	7	1	0	0	28,295	2	7	55,416	2	9

THE MADRAS CHILD WELFARE SCHEME.

The Child Welfare Scheme is framed and carried out by the Madras Corporation for the preservation of the health and life of the mother during her maternity period and for the supervision over the life and health of children under one year of age though the aim of a fully developed child welfare-scheme must be to supervise the health of the children until they reach school age.

Extent of the scheme.

Statistics show that there is a serious sacrifice of child-life, and it is also recognised that under special care and the adoption of every known and possible preventive measure, infantile mortality can be very materially reduced. The comparative number of deaths among children which occur in the different divisions of the city and the outstanding causes which contribute to these are the main considerations in counting upon the extent of the scheme.

The Cause of the Scheme.

The various ailments which contribute towards the enormous death-rate among young children are in the order of their prevalence.

1. Diseases of the Nervous System
2. Digestive diseases with Diarrhoea and Dysentery
3. Premature birth associated with maternity conditions and debility
4. Respiratory diseases such as Broncho pneumonia.
5. Fevers, Malaria, etc.
6. Infectious diseases such as Small-pox, Measles, Chicken-pox.

It is almost needless to point out that the large number of fatal cases grouped under various causes may be, in very many instances regarded as preventable diseases.

Causes which produce a high infantile mortality are:—

(1) The social and economic conditions that aggravate the sanitary imperfections inseparable from an over-crowded community,

(2) Young and inexperienced mother-hood.

(3) The barbarous treatment of untrained barber women frequently esulting in umbilical sepsis and tetanus.

(4) Ignorance of even the simplest rules of hygienic living on the part of the mother.

(5) Unsatisfactory and insanitary surroundings, neglect of proper treatment, absence of a medical attendant, all contributing to a great majority of deaths in the poorer parts of the City.

(6) Poverty

(7) Alcoholism } These contribute to antenatal (causes.)

(8) Syphilis

All these causes exert their full influence in swelling the infantile mortality of Madras and the Child Welfare Scheme takes cognisance of each of these factors and the details of the scheme are directed very specially against these conditions of affairs so that a substantial reduction in the mortality rate may be successfully effected.

The Scheme.

The scheme for maternity and child welfare includes the already existing institutions for curative purposes and others of a preventive nature.

The main institutions devoted to curative treatment:—

(1) *For sick children*:—

(*a*) The Government General Hospital

(*b*) The Royapuram Hospital

(*c*) The Royapettah Hospital

(*d*) The Infectious Diseases Hospital

(*e*) The Lady Willingdon Children's Hospital

(2) *For maternity*:—

(*a*) Government Maternity Hospital

(*b*) The Victoria Caste and Ghosha Hospital

(*c*) The Rajah Sir Ramaswamy Mudaliar's Lying-in-Hospital, Royapuram

Subsidiary institutions devoted to curative treatment.

These institutions are the several Corporation Dispensaries such as

(*a*) Washermanpet Dispensary

(*b*) Baliah Naidu Dispensary

(*c*) Triplicane Dispensary

(*d*) Kilpauk Dispensary

(*e*) Georgetown Dispensary.

These institutions are for all serious ailments requiring continued care and observation.

Preventive part of the scheme.

All children are not sick and one of the chief objects of a good child welfare scheme must be to prevent them as far as possible from falling victims to illness. Any scheme which provides for only curative treatment of the ailing must be regarded as unsatisfactory. Preventive and educative measures must bulk largely in a scheme which has any right to hope for a successful issue. The preventive institutions under the Madras Child Welfare Scheme are the Madras Child Welfare Centres. They are three in number, viz., the Washermanpet Centre, the Purasawakam Centre and the Triplicane Centre. The situation of these has been advisedly selected. In the selection of child welfare centres three prominent facts should be taken into consideration. They are :—

(1) The centre should be located at a place around which there is a dense population of young life.

(2) The comparative number of deaths which occur in the different divisions of the city should point to the situation of the centre.

(3) The outstanding causes which contribute to infantile deaths.

That the places where the present Health Centres are located answer to the above stipulations will be gleaned by a perusal of the statement showing the total number of live-births, infantile mortality and infantile death-rate registered in the City of Madras during the calendar year 1920, which is annexed to this report.

While measures are adopted at the various centres towards the maintenance of health and the prevention of disease, it has been found impossible to exclude certain phases of work which might legitimately be included in curative medicine. Small dispensaries are run at each centre, where simple prescriptions are dispensed, so that minor ailments can be quickly and easily remedied.

The immediate object in view in carrying on this work is to induce the mothers to bring their children to the centres where their health conditions may be kept under periodic observation.

The objects of a centre are not merely preventive but primarily educative At these centres mothers should receive advice as to the proper

Statement showing the total number of live births, infantile mortality and infantile death-rate registered in the city of Madras during the calendar year 1920.

Municipal divisions.	Total number of live births.	Total number of infantile mortality.	Infantile death-rate on 1,000 live births.	Remarks.
1	898	295	328·5	
2	958	266	277·7	
3	1,120	311	277·7	
4	768	200	260·4	
5	263	109	441·4	
6	288	90	312·5	
7	426	134	314·6	
8	138	56	405·8	
9	700	229	327·1	
10	675	236	349·6	
11	177	90	508·4	
12	680	227	333·9	
13	597	217	363·5	
14	72	36	500·0	
15	536	179	333·9	
16	1,077	228	211·7	
17	1,075	282	262·3	
18	881	219	248·6	
19	867	202	233·0	
20	1,152	269	233·5	
21	637	166	260·9	
22	683	160	234·3	
23	1,221	340	278·5	
24	1,230	307	249·6	
25	616	168	272·7	
26	639	151	236·3	
27	823	214	260·0	
28	817	231	282·7	
29	783	188	240·1	
30	599	176	293·8	
Total	21,396	5,976	279·3	

clothing, feeding and to the general attention necessary for the healthy up-bringing of the child.

The rate of infantile mortality increasesmaterially by the inability of the poorer classes to obtain a sufficient supply of nourishment for their infants. In the absence of a sufficiency of the commonest form of nourishment necessary for the up-keep of the child, health visitation and instruction will prove absolutely futile. The Corporation has therefore provided a sum of Rs. 5,000 to supply "milk" or other suitable nourishing food to absolutely authenticated and necessitious cases, and this only to infants delivered under the Child Welfare Scheme.

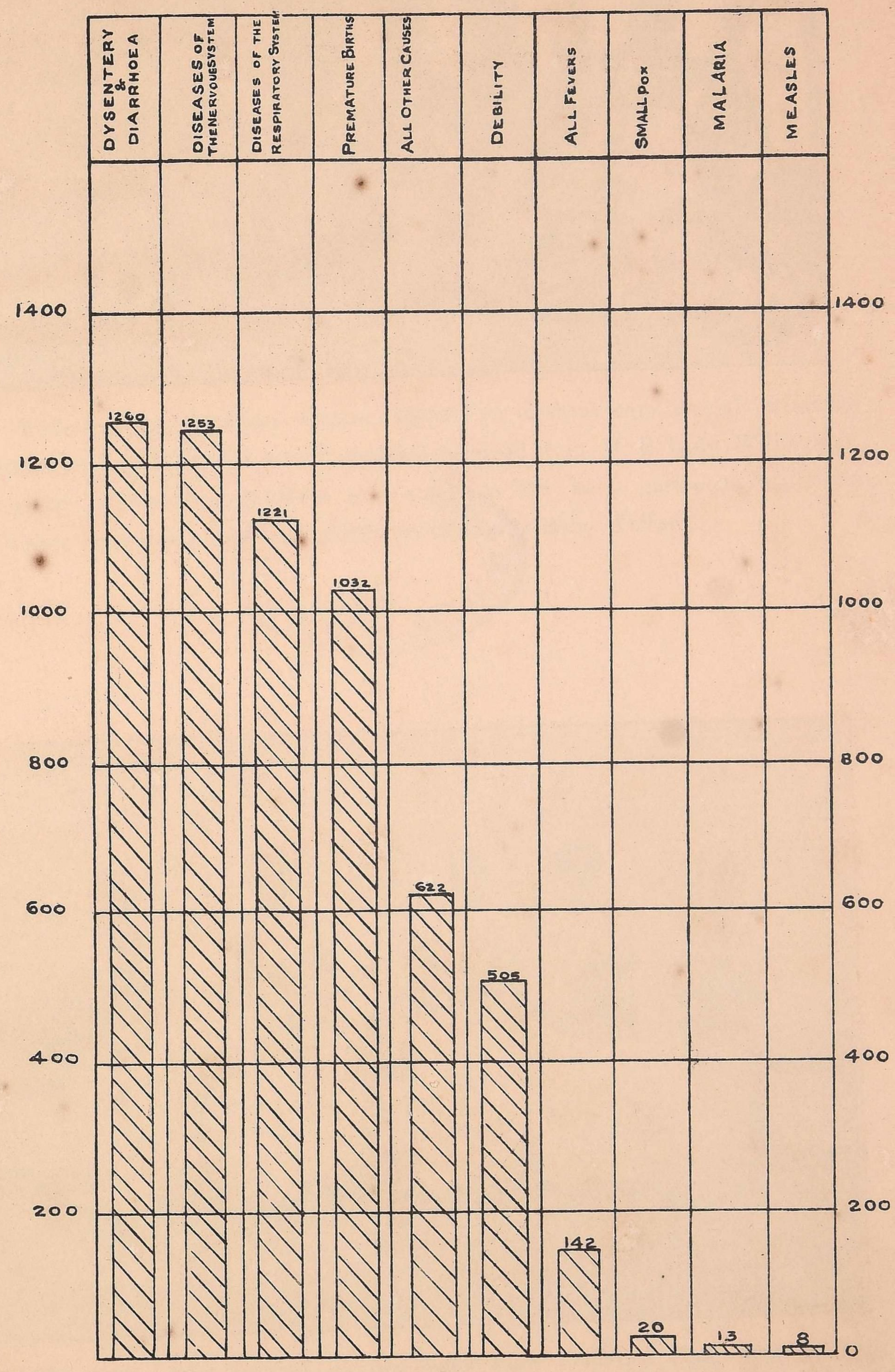
The important institutions which come under preventive measures to be adopted under the scheme are :—

Children's Hospitals
Day Nurseries
Kindergarten Schools
Open Air Play Centres
Convalescent Homes and
Schools for mothers,

and steps in this direction will be taken gradually when the Corporation finds funds and "when public philanthropy finds its out-let for activity in the directions mentioned above."

C. SINGARAVELU,
13—5—1921.
Officiating Health Officer.

CAUSES OF INFANTILE DEATHS
1920



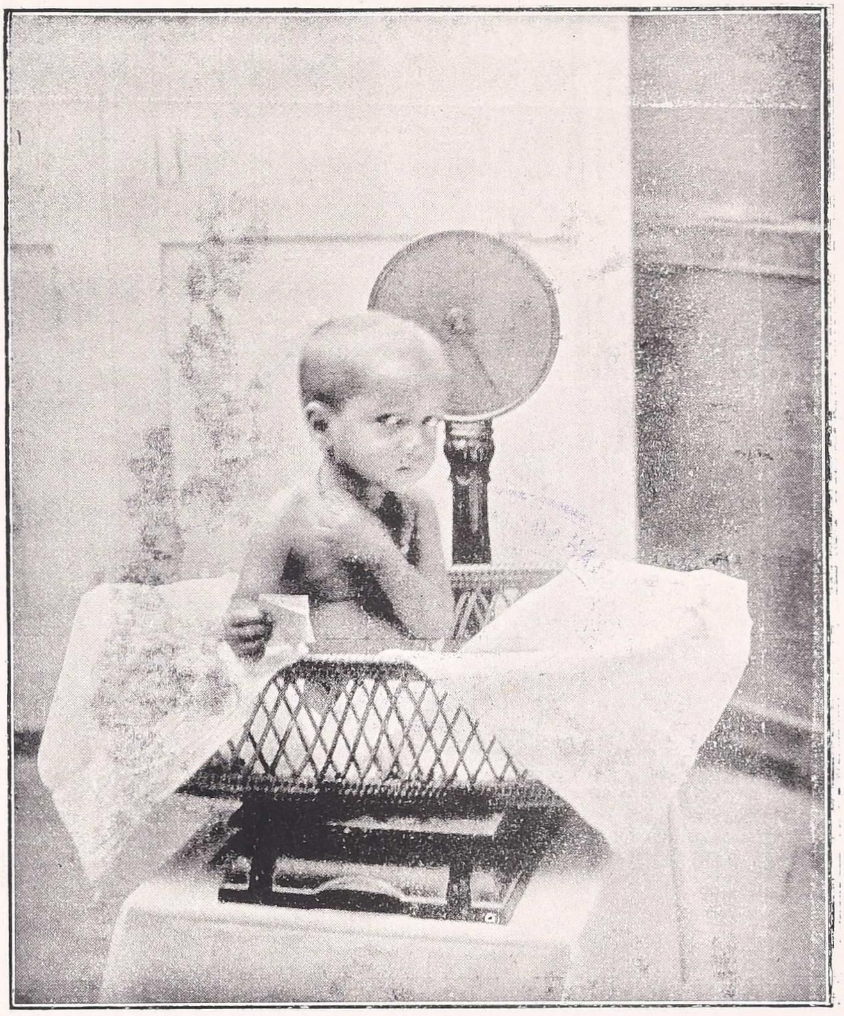
Reg. No. 1266
Copies 600

Vandyke., Survey Office, Madras.
1921.

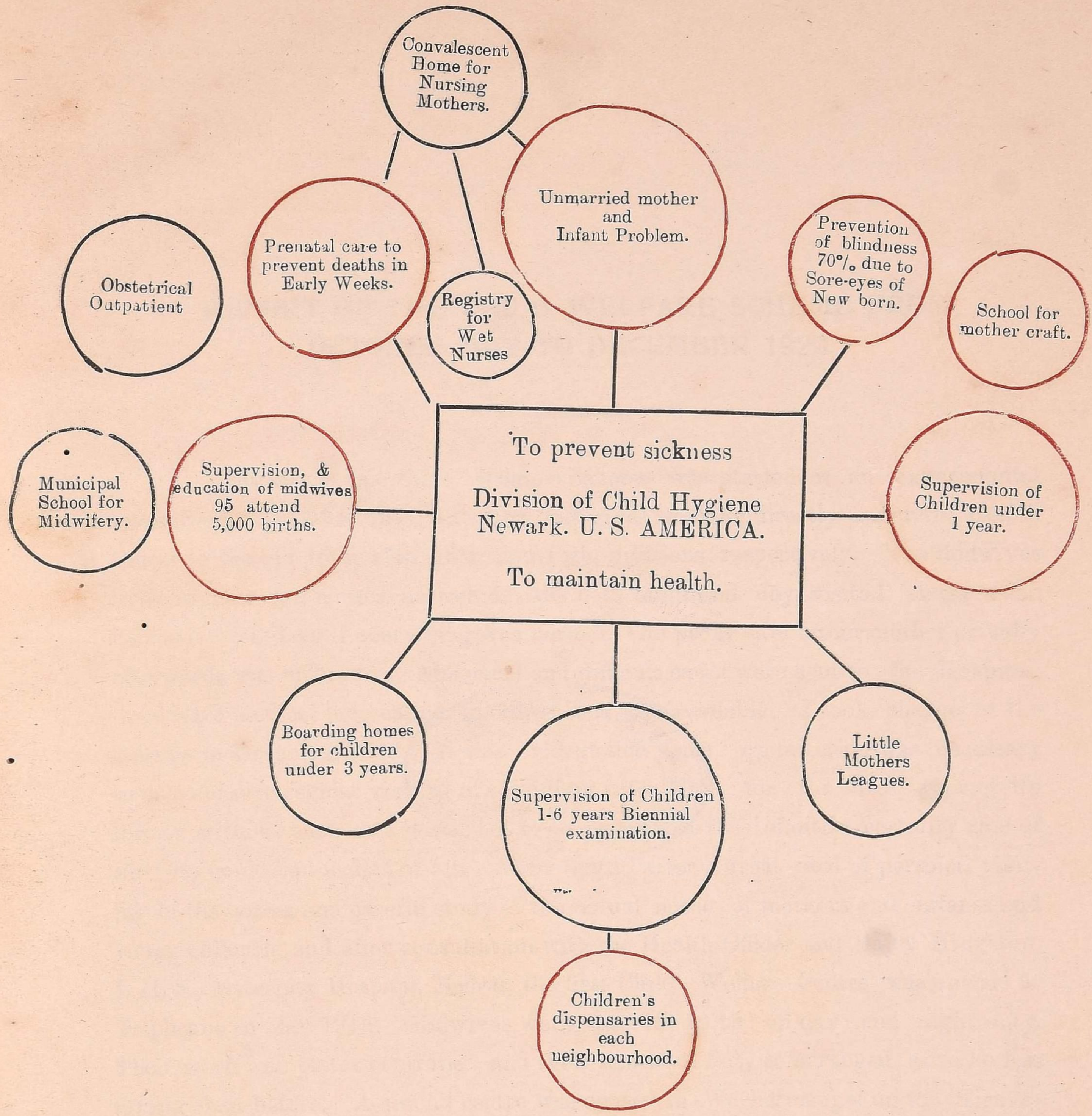
Note.—Reproduced from the original received from the Health Officer, Corporation of Madras.

Mothers' Class, Triplicane Centre. Classes for mothers were opened in all the three Centres in July 1920 with a kind donation received from H. E. Lady Willingdon. Mothers gather in increasing numbers once a week to sew baby garments, while the Health Visitor in charge gives them simple instruction in Baby Welfare.

Our babies who entered for the baby show Victoria Hall, Madras, 31st January 1920. The third baby from the right was a prize winner. She is one of our milk babies. Her father is an advanced consumptive and out of work. The mother is supported by relatives.



Narayana Rao a case of Rickets in the care of the Triplicane centre from 1-1-20 to 30-12-20. He weighed $10\frac{1}{2}$ lbs. on 1-1-20 and was unable to sit up in bed. He weighed $25\frac{1}{2}$ lbs. on 30-12-20 and was then able to run about quite well.



A complete Programme of Child Welfare Work as adopted in Newark, United States of America.

Red circles indicate branches of Child Welfare Work undertaken by Madras Corporation in some areas of City. (In Seventeen Divisions)

Infant Mortality Rates.

Newark (Deaths under one year per 1,000 births.)

1910............123

1917............87·8

Infant Mortality Rates.

	City of Madras.	Working area of Child Welfare Scheme.	For infants in care of C.W. Scheme
1918	355·2	363 4	276·8
1919	329 0	Not available owing to redistribution of the city into new Municipal Divisions.	231·4

REPORT OF THE CHILD WELFARE SCHEME FROM OCTOBER 1919 TO DECEMBER 1920.

Review.—The Child Welfare Scheme was started as an experimental measure in September 1917 with four midwives working directly under the Health Officer in the old 16th, 17th, 18th, and 19th, divisions respectively. The midwives lived in their own houses, answered calls both night and day, visited mothers and babies for ten days if everything was normal. The progress of either mother or baby afterwards was unknown. Abnormal and difficult cases were sent to the Hospital, or private medical help called in, when such was available. I took charge of the Scheme in December 1917. It was evident that some organisation was necessary so as to ensure regular visiting of the infant after birth for the first year of its life, as without such care it was not to be hoped that the infantile mortality rate of the City could be touched at all. Accordingly, after a great deal of personal visiting in the homes and careful study of the actual needs of mothers and infants and young children, and after consultation with the Health Officer and Major Hingston, I. M. S., Maternity Hospital, Madras, the first Child Welfare Centre was opened at Triplicane in May 1918. Midwives were posted to be on day and night duty. Their work was better controlled, and their hours of duty so arranged as to be less taxing than before. A second centre was opened in Washermanpet on the Tiruvathiyoor High Road in the Old Vaccination Depot in May 1919; and in October 1919 a third Centre was opened at Purasawakam in a building belonging to the Corporation next to the Bauliah Naidu Dispensary. The services of an assistant were secured in October 1919 but she left us in February 1920 to secure a post in the Maternity Hospital. I continued to be in direct charge of all the three centres with the assistance of Health Visitors till May and June 1920, when the assistance of Miss Kolandaivelu, Lady Apothecary and Mrs. Rodrigues, Lady Sub-Assistant Surgeon was secured for Purasawakam and Washermanpet Centres respectively. As the work of the Scheme was steadily growing, Health Visitor E. Manonmani who held a diploma in both General Nursing and Midwifery, was appointed in October 1920 to be in resident charge of Triplicane Centre to which no assistant doctor has as yet been appointed. She continued in that place till November 1920, when Health Visitor M. Gopi Bai was appointed. The resident Health Visitors in Triplicane have, each in her turn, been able to assist me largely, and I have thus been able to

find time for weekly clinics to the Health Visitors in the other Centres, and for the work of the Scheme in general. The staff at present is as follows :—

Triplicane.	Washermanpet.	Purasawakam.
1 Resident Health Visitor	1 Lady Doctor	1 Lady Doctor
3 Health Visitors	2 Health Visitors	2 Health Visitors
9 Nurses	8 Nurses	8 Nurses

There has been a satisfactory increase in the number of cases conducted, and improvement in work generally, in Washermanpet and Purasawakam since the appointment of medical women to be in charge of the respective centres. Out of a total of 1,154 live births conducted in the Scheme in 1919, the deaths under one year were 267, giving thus an infantile death-rate of 231·1 as against a death rate of 280·4 per mille for the City for 1920.

Health Visitors.—In June 1918 the plan was tried of appointing two of the senior nurses as health visitors, i.e., to take charge of the mother and baby from the midwife as soon as the latter ceased attending, and to visit the baby monthly, or more frequently, if necessary, for the first year of its life. This measure was largely experimental, and by no means easily carried out either, considering that the two selected had very little general education. But the plan was persisted in, and in 1919 classes were held regularly in Physiology, Domestic Hygiene and Sanitation, Medicine, Home-Nursing, Maternal and Infant Welfare and First-Aid. At the end of 1919 was launched forth the first set of three health visitors, one of whom had a very good knowledge of English and also had a diploma in both general nursing and midwifery. With midwives who could barely write their own name, who understood naught of statistics, and who could not at the beginning be trusted to enter the serial number of a case correctly, the prospect seemed dark of securing suitable health visitors for the Scheme. It was also seriously doubted whether the health visitors would at all be fit to undertake the responsibilities of their position. But the advance in this matter has been both vast and encouraging and from having been barely able to follow up cases left by the midwives, the health visitor in the Scheme to-day has her work detailed under the following heads :—

1. Number of midwifery cases conducted during the year.
2. Maternal Mortality and Morbidity.
3. Diseases and Ailments of Pregnancy reported at Centre.
4. Report on Hygiene and Sanitation in private houses.

5. Advice and teaching regarding the prevention and spread of diseases, and the value of the different food stuffs.

6. First-Aid and Home Nursing.

7. Registration of the names of pregnant women.

There is no doubt that the right kind of woman can be induced to take up this branch of medical work now recognised to have a definite standing of its own in the medical profession, provided that necessary arrangements are made for their training and their future prospects are clearly defined. The health visitor trained in the Scheme to-day although in herself efficient and capable has no standing outside the Corporation for the lack of a diploma. I would suggest that a Board of Examiners, connected either with the Countess of Dufferin Fund or the South Indian Health and Welfare Association, be appointed to examine the candidates in training in the Scheme and to grant them a diploma which will be recognised anywhere in India. Scholarships for suitable candidates may be given by either of these two bodies. The trained health visitor is the most important agent in child welfare work, and the importance that is attached to the training of health visitors in England and Wales may well be gathered from the following extract from the Report of the Ministery of Health for 1919. The qualification of the health visitors employed by Local Authorities (apart from District Nurses) are approximately as follows:—

986 are fully trained Nurses
1,360 are certified Midwives
245 are qualified Sanitary Inspectors
147 have the special certificate for Health Visitor issued by the Royal Sanitary Institute, Battersea Polytechnic, National Health Society, Royal Institute of Public Health, and other similar bodies.

1,133 health visitors have more than one of the qualifications enumerated. None of these qualifications, however, were designed to fit a woman specially for the work of health visitor and it has been recognised that when circumstances permitted a special curriculum and certificate should be prescribed for women wishing to become health visitors. Accordingly during the past year, the Board of Education in consultation with the Ministry issued regulations providing for a branch in respect of the training of health visitors according to the specially designed curriculum. The course of training occupied two years in ordinary cases, and one year in the cases of trained nurses or other women with qualifications or experience likely to fit them for the work after a shortened course. "The training prescribed consists of theoretical work at an educational institution affiliated to a University, *with practical work at Maternity and Child Welfare Institutions.*" The Ministry of

Health has made a great advance in child welfare work by placing the training of health visitors on such an excellent basis. The scope for the training of health visitors in the Child Welfare Scheme, Madras, is very great. In 1920, 33,367 visits to various houses were made by the health visitors of the Scheme. Dr. Balfour, Joint Secretary, Countess of Dufferin Fund, Viceregal Lodge, Simla, writes as follows : " This work would make a good centre for a training school for women health workers which is much needed if the best results are to be obtained "

I feel very strongly that the time is come for the Corporation to place the training of health visitors on a correct basis, and cause it proceed on definite lines. For it must be noted that a Child Welfare Scheme is as much the training ground for health visitors as a General Hospital is for nurses or a Maternity Hospital for midwives. Against the objection that it is not for a local body to train workers for the moffussil, and that if this training be undertaken in the Child Welfare Scheme, it would be a loss to the Corporation to pay its workers, may be urged the fact that candidates for training from outside the scheme would be provided with scholarships. And as such the Corporation would lose no more than the Local Fund or the Government Hospitals, which in return for training given have the free services of the probationer undergoing training. It is clearly therefore a gain to the Corporation to provide for the training of health visitors in connection with the work of the Scheme, and the effort is well worth making if it be only to obtain the 50 health visitors needed for the city on the basis adopted by the Ministry of Health, of one health visitor for 400 births and taking the number of births in Madras yearly to be 20,000. The number of health visitors suggested will seem by no means large when it is known "that the approximate equivalent of full-time health visitors employed in England and Wales is 1,607 and that the full staff of whole time health visitors required has been fixed at 1,730" (Extract Ministry of Health Report 1919).

I wish to point out that the conduct of child welfare work depends chiefly on the health visitor. While midwifery may still continue to be the basis of our work, owing to the large amount of midwifery practice yet in the hands of unqualified women, there is every reason to suppose that after a few years when the present education of the public as regards the importance of trained attendance at child-birth has taken effect, with the establishment of private nursing homes, and when private nurses are available in larger numbers, the demand for midwifery service from the Child Welfare Scheme will not be as great. But the work of the health visitor is bound to develop and expand into something greater and more responsible every succeeding year. The question of training health visitors therefore cannot be overlooked. Several applications from suitable candidates were received by me but to none has it been possible to give a definite reply ; the loss of good

workers for the future therefore is on the side of the Scheme. Four health visitors were trained in 1920; the total number of trained health visitors in the city is 7, two of whom hold a diploma in both General Nursing and Midwifery.

Midwifery:—The midwifery service of the Child Welfare Scheme has become very popular indeed. The total of 4,372 patients who had been in the care of the Scheme from October 1919 to December 1920 is shown in Statement I Page 14:—

The opposition on the part of the public to the removal of cases to hospital is now giving way. This fact is welcome indeed to the worried nurse and doctor who are often at their wit's end as to how to find necessary accommodation, food, linen and efficient nursing facilities for a patient. A patient whose "address" was registered at the Triplicane Centre was searched for by a nurse on duty in the locality of the "address" given and could not be found. Much disappointed the nurse was returning to the centre when to her bewilderment she found that her patient had been delivered in a broken cart. The woman was in such sore necessity that the nurse felt forced to tear a piece off her own sari to meet the need. After three days persuasion the patient was induced to go into hospital for safe care and treatment.

We would take this opportunity to thank the Government Maternity, Victoria, Kalyani, Raja Sir Ramaswamy and Rainy Hospitals for prompt admission and treatment of cases sent by the staff of the Scheme.

The first two hospitals record a marked increase in their Maternity cases.

Owing to the graded scale of pay granted to health visitors in 1919 it has been possible to attract better candidates into the midwifery service of the Scheme The health visitors have been chosen out of the midwives and at present there are four with a diploma in both General Nursing and Midwifery.

The midwives have continued to live under the supervision of a health visitor in quarters provided for them by the Corporation The new building rented both as Centre and quarters for midwives in Triplicane in Bangaru Naicken Street during November 1920 collapsed entirely during the heavy rain that month. A hurried return to the old centre in Vallabha Agraharam was effected, and quarters for the midwives have not yet been procured since. Quarters for the midwives of Washermanpet and Purasawakam Centres have been obtained very near their respective Centres. There is yet a pressing need in the Scheme for efficient midwives although it has been found possible to employ more capable hands owing to the establishment of a graded scale in 1919, by which a midwife may rise from Rs. 35 to Rs. 50 per mensem with respective allowances. As it seems to be yet in England, "the

main difficulty at present is not to find money for training but women to be trained and places to train them". (Extract Ministry of Health Report 1919). Perhaps it may not be out of place here to appeal to the public for a more respectful treatment of nurses and for greater regard for their profession, if it is only with the object of attracting respectable women into the nursing profession. The services of the Child Welfare Scheme nurse are often claimed authoritatively and rudely. That the rate-payer has a right to her services is true, but the rude demand on the part of the rate-payer cannot always be met with sympathy on the part of the nurse. The work of the midwife is carried out in the filthiest parts of the city among the lowest of the city's population both day and night, in sun and rain, through long hours of duty, and the public spirited are earnestly asked to assist them, in their difficult work.

Professional visits paid by the staff of the Scheme are as follows:

October 1919 to December 1920.

Centre.	Midwives.	Health Visitors.
Triplicane.	23,883	15,197
Washermanpet.	12,248	8,220
Purasawalkam.	14,512	10,250
Total ...	50,643	33,367

Visits to abnormal and difficult cases made by the Superintendent or Doctor of the Centre are as follows:—

	1920.	October to December 1919.
Lady Doctor, Washermanpet Centre.	760	
do Purasawakam Centre.	350	119
Superintendent in all the Centres.	374	61

2. Forceps { 1 Persistent Occipito Posterior, Triplicane; 2 High Forceps Rickety Pelvis Purasawakam. } By Superintendent.

1 Craniotomy Hydrocephalus	Triplicane.	do
1 Extraction of after coming head	do	do
2 Manual removal of adherent placenta	Purasawalkam	do
6 Manual removal of adherent placenta	Washermanpet.	By Lady Doctor Washermanpet Centre.

MILK-DEPOT :—Through the generosity of the Corporation a milk depot was opened at the Triplicane Centre on 10-10-19 at the kind suggestion of Her Excellency Lady Willingdon. 349 milk cards were given in—1920; 90 were given from October to December 1919. The daily attendance of infants receiving milk varied from 62 in January 1920 to the highest attendance on record, i. e., 150 at the end of August 1920. 120 milk cards have been already issued for 1921. Milk is given sterilised in aluminium cans. Needy infants are given cards by the health visitors in the homes. On production of these cards at the centre the infants are weighed. Those whose weights are found to be satisfactory are referred for observation by the health visitor for a fortnight or a month, and if on re-weighing, no satisfactory progress is noted, milk is given. Milk is also given to some anæmic mothers during the puerperium. Infants who receive milk are personally weighed by me once a fortnight, their progress noted, and the necessary increase in quantity made. When the infant is found to have at least six teeth and is considered fit to digest other foods the supply of milk is discontinued. Pathetic appeals have been made by mothers for the continuance of the supply of milk after this period, and two instances at least have been brought to our notice of children who died two months after the supply of milk was discontinued. It is worthy of remark that not a single complaint as regards the quality or quantity of milk given has reached me from parents of infants supplied with milk. An objection has been raised that the supply of free milk discourages breast-feeding on the part of the mothers, and therefore ought not to be allowed. In England and France milk depots have been largely given up lately for this reason; but while the English mother is persuaded with difficulty to nurse her baby the Indian mother with difficulty is persuaded to do the contrary even after the baby is 18 months old. The milk is given under the strictest supervision as stated above, and surely the proportion of 150 which is the largest daily attendance on record of babies receiving milk to a total of 1,700 and more infants, i.e, 9 per cent, cannot be considered as too large for artificial feeding. One of our milk babies won a first prize at the Baby Show held in Victoria Hall on 31st January 1920.

The supply of milk at the Centre has afforded us unlimited scope for the teaching of mothers regarding feeding and growth of infants and now a large majority of the women living in the working area of the Scheme have learnt the true cause of Infantile Diarrhoea and the correct way to deal with this disease. The experiment of a milk depot in Triplicane has been successful without a doubt. It is hoped that as soon as finances will permit depots will be opened in the other centres, in each of which about 1,000 babies are at present being cared for.

The Work of the Dispensaries and Diseases among Children and Infants:-The dispensaries opened at the Centres for expectant and nursing mothers

and for children have grown increasingly popular. The figures for the three centres for the period of work are inserted in Statement IV on Page 16:

The bulk of the pre-maternity work of the Scheme is done by means of the dispensaries. Expectant mothers are sent to the dispensaries by the health visitors where they are examined and necessary advice and treatment given. Women and children are resorting to the dispensaries with ever-increasing trust. A great deal of superstition has been broken through, perhaps there is an equal amount to break through yet. In Triplicane dispensary as many as sixty cords round waists and arms and variously shaped and sized pieces of leather which had been in much trust and confidence tied to an innocent sufferer with the hope of obtaining recovery, have been in a single day removed by the mothers themselves on their seeing that our treatment was more effective than the talisman.

Whooping Cough :—In 1918 and 1919 no cases of Whooping Cough were brought to the Centre for treatment, because of the belief that the disease must run its course and that no treatment but the tying of a beanshaped piece of leather round the neck of the unfortunate sufferer was of any avail During 1920 several cases of Whooping Cough were treated at the Triplicane centre and mothers have freely owned that the disease is amenable to treatment.

Rickets :—Rickets is yet very largely prevalent but mothers are beginning to realise the true causes of this evil disease, and health visitors and midwives have started a campaign in the homes against the too early feeding of the infant with starchy foods, and are busy teaching mothers the full value of fresh foods and juices as preventives. Several of the babies supplied with milk at the depot were found to have been previously fed on starchy foods.

Bronchitis and Broncho-Pneumonia :—Bronchitis and Broncho Pneumonia due to over-crowding, foul air, and filthy surroundings are still the cause of the majority of deaths among infants.

Influenza :—Out of 177 babies born between October and December 1919 in Triplicane there were 13 still-births, 9 premature births, 9 deaths within ten days and 24 deaths within the first three months. The total loss of child-life during these three months for the 177 cases was 55, and this loss was due directly, or indirectly through the mothers, to the epidemic of Influenza then raging in the city. 26 of these infants died directly of Influenza and its complications. This is a sure indication of the fact that infants and children are most affected by general causes affecting public health.

The death-rate for infants in the care of the Scheme as compared with the rates for the city is as follows:—

City.		Working area of Scheme	Child Welfare Scheme.
1919	355·5 per mille of births	363·4	276·8 per mille.
1920	280·4 do.	256·7	231·1 do.

It must be borne in mind that the working areas of the Scheme returned comparatively the largest death-rates for different areas of the City.

Observation beds have been provided in the Triplicane Centre and during 1920, 12 patients, women and children have been admitted and treated for various complaints.

Ignorance and Poverty: The Relationship of the Child Welfare Scheme to Private Medical Practice:—A very large majority of people living in the working area of the Scheme and among whom cases are chiefly conducted are undoubtedly poor and ignorant, and as such, our services are theirs by right. Instances of disastrous results to mothers at child-birth owing to the interference of barber women are seldom heard of now in Triplicane, where work has been carried on for fully three years, but are fairly frequent in Washermanpet and Purasawakam where the Scheme has worked for about a year and a half only. In Washermanpet where the people among whom the Scheme works are of the lowest type, the doctor in charge reports of the two following instances among others. (1) where a woman was fixed against a pillar and trough pressure exerted on her uterus by the barber woman's head; she adds "I also saw the barber woman cutting the cord with a dirty rusty knife, (2) where the barber woman presisted in tugging at the cord for removal of placenta, obstinately refusing to let the Child Welfare Scheme nurse touch her patient. The patient collapsed after bad haemorrhage.

Difficulty has been experienced in limiting our services entirely to the poor. Complaints have also been made that we are attending on the rich. With the permission and approval of the Health Officer and the Commissioner an income of Rs. 100 per mensem was fixed as the limit beyond which our attendance could not be given except in cases of extreme urgency. When a call is registered at the Centre the income of the patient is noted. According to our records about 80 per cent of cases registered have an income below Rs. 50 per mensem and of these a large majority are cases of extreme poverty. If the income noted is above Rs. 100 per mensem the patient is asked to call private attendance. This advice is usually accepted; but some adopt a difficult attitude actual instances of which I give below (1) X a Muhammadan wished to have a nurse for his aunt, wife of a Post-master. Her income was entered as Rs. 105 per mensem. I happened to be at the Centre then and informed X of our rules. He promptly changed the income to Rs. 85 per mensem and then defied me to with-hold from him his right as a rate payer to the free services of a midwife. (2) Y, Hindu servant of a big land-lord wanted a nurse for his master's wife. He informed me that his master's income was several

thousands a month. I told him he would have to make arrangements for private attendance. Y went away. The same night a very urgent call was registered at the Centre, the nurse without delay proceeded to the house and found her patient to be the wife of the above landlord. The private doctor who had been called arrived just as the midwife had finished conducting the case. The nurse returned after handing over the case to the private doctor.

(3) Z, a Hindu wished to have a nurse for his aunt, Income Rs. 250 per mensem ; I informed him of our rules. His reply was " Oh ! My uncle is a small merchant perhaps his income is much less than Rs. 100 per mensem ". He was on the point of scoring out the income he had written on the calls' register, and of writing something much lower, when I politely informed him that he could easily write an untruth and command the free services of a nurse, but as a member of public he was not helping us to restrict our work to those for whom only it was intended. After a few minutes thought, he left the centre agreeing to make his own arrangements.

Such and more are our difficulties in restricting our services to those for whom they are meant and we would ask every member of the public to co-operate with us in keeping this rule. We would also ask for the support of private medical practitioners in this respect. The object of the Scheme is not to take up all the medical and midwifery practice of the city. Nor would that be possible. Our object is to see that every woman has provision made for medical attendance in time of need for herself and for her child. Patients never inform us of their family doctors. Some wish to have both our services and also those of the doctor; others prefer to have only our free services. Often and again a private nurse in attendance has been hidden away somewhere on the arrival of the nurse or doctor of the Scheme. People in their ignorance wish to have the attendance and advice of more than one doctor or nurse and end perhaps by taking none. Our practice is where a private doctor or nurse is found, for the people never inform us, to hand over the case to the doctor or nurse. This would be much easier if we were informed by private practitioners directly they were engaged on a case we were attending, that our services were not needed any more. I need hardly point out that the staff of the Scheme is placed in such a position that their services are asked for at pleasure and dispensed with similarly.

Mothers' Classes-The relationship of the Scheme to Voluntary Workers:—The donation of Rs. 300 from Her Excellency Lady Willingdon acknowledged thankfully in our report for last year has been used in opening classes for mothers. Mothers gather in increasing numbers one afternoon in the week to sew garments for their infants. Expectant mothers have been taught to make their maternity outfits. As many as 61 names have been enrolled in Triplicane, and

in Purasawakam and Washermanpet, where our work is still new, the attendance has risen satisfactorily. A magic lantern ordered at Lawrence & Mayo several months ago has not yet been received. But with Rs. 100 sanctioned by the Corporation lantern slides have been prepared, and the idea is to teach these mothers with the aid of these slides important truths regarding the care and up bringing of children.

Several willing ladies have asked me at various times as to how they could help honorarily with the work of the Scheme Replies could not be given easily, for the work of the Scheme has just recently been organised and any voluntary work under taken had to be so arranged as not to clash with the official management of the Scheme.

Under the direction of H. E. Lady Willingdon and with the kind assistance of Mrs. Lloyd and Mrs. Richards it has been possible to form a band of workers who are interested in the following subjects which have a direct bearing on child welfare in the City :—

(1) Encouragement of Home Industries especially embroidery work by Ghosha Women.	Lady Davidson. Mrs. Appasamy, B A.
(2) Rescue Homes for unmarried mothers, and for illegitimate and home less children.	Mrs. Venkiah. Mrs. Symons. Mrs. Devadoss.
(3) Purdah garden for the City.	Mrs. Bazlullah. Mrs. Rama Rao, M.A. Mrs. J. E. Hensman. Mrs. Subbarayan, B.A. Mrs. Swaminadhan.

Two parcels of clothes have already been received through Mrs. Richards from the Red Cross. A parcel containing some flannel wrappers was also received from the Y. W. C. A., Queen Mary's College Branch, through Miss Zachariah, M.A., Student Secretary. Her Excellency Lady Willingdon has expressed her wish that a series of lectures with lantern slides should be given to women in this city through the Ladies' Recreation Club to interest more women in child welfare work.

Exhibitions.—The Child Welfare Scheme assisted Mrs. Giffard in the child welfare section of the Women's Work Exhibition held in November 1919

under the Presidentship of H. E. Lady Willingdon. Her Excellency Lady Chelmsford who opened the Exhibition invited the Scheme to take part in the Maternity and Infant Welfare Exhibition which was held in February 1920 in Delhi and through the efforts of H. E. Lady Willingdon the Scheme was represented at the Delhi Exhibition. The three trained health visitors of the Scheme and I went up with the exhibits of the Scheme. The Delhi exhibition was a great success, and the educative results of it as far as we were concerned were great and for this we owe Her Excellency our thanks. The Scheme also took part in the Social Welfare Exhibition held in January 1920 in the Victoria Hall and one of our milk babies was the winner of a first prize at the Baby Show.

Conclusion:—Child welfare work is chiefly woman's field. The interest that has been aroused in the leading women of the city in the cause of child welfare is a great encouragement to all child welfare workers. In countries where child welfare work has made progress, the story of its advancement has been one of being worked, first by voluntary agency, then by local authority and finally by the State. Since history repeats itself there is no doubt that these great needs of the women and children in our city will be satisfied more fully and more efficiently in the future. Infantile death-rate in the Scheme to our pleasant surprise has already shown a decrease for the past year. But large areas of the city yet remain untouched and the ambition of the Child Welfare Scheme cannot rest satisfied till every child otherwise uncared for is brought within its care. The fourth centre sanctioned in the Budget for 1920 in Georgetown has not yet been opened. Sanction was also made in the Budget for 1920 for the erection of a child welfare centre in Georgetown on a piece of land belonging to the Corporation. This too has not yet been put up Delay in the progress of child welfare work can only be ascribed to one reason, viz., that in the march of progress and civilization the needs of women and children who are yet voiceless in this city are receiving secondary consideration. That such delay retards the general advance of the State has not yet been realised. To any one who has studied the figures of Maternity Hospitals it is evident that the Scheme is making provision for a large amount of midwifery work very cheaply and very efficiently. The cost of each conducted case of labour from December 1917 to December 1920 comes to only Rs. 11-7-7. This cost includes the care of infants and mothers for a year after birth, which can be under-taken by no Hospital. TheScheme, therefore, has a unique place in providing for the health and comfort of thousands of woman and children in this city through its many channels of work. This aspect needs to be taken account of when the permanency of the Scheme is considered.

To all ladies and gentlemen who have helped us with their interest, especially to H. E. Lady Willingdon whose neverfailing and large-hearted sympathy has been our greatest support, we tender our deepest gratitude. We would also ask them to continue their help in an increasing measure in the future. For after all the care of poor women and helpless infants as a duty is such from a fourfold aspect; duty we owe to ourselves for our own self advancement, to our neighbours for their progress and welfare, to our country for its glorious future and for these reasons, a duty to the Divine Will for man.

Madras,

24th February, 1921

L. N. VIRASINGHE, M. B., B. S.,

Lady Superintendent,
Child Welfare Scheme.
Corporation of Madras

STATEMENT I.

Showing the cases of labour conducted by the Staff of the Child Welfare Scheme from October 1919 to December 1920 with Comparative Statements.

Period.	Centres.	How Conducted.			Total Cases.	Caste.	
		By Nurses of the C. W. S.	Taken to Hospital.	Taken over after barber women.		Mahomedans.	Non Mahomedans.
From October 1919 to December 1920 ...	Triplicane	1,682	115	229	2,026	766	1,260
	Washermanpet ...	767	59	332	1,158	165	993
	Purasawalkam ...	933	58	197	1,188	124	1,064
Total ...	...	3,382	232	758	4,372	1,055	3,317
Total for one year ending with September 1918	Triplicane	550	54	77	681	...	...
Total for one year ending with September 1919	Triplicane	906	68	78	1,052	540	512
Total from May 1919 to October 1919 ...	Washermanpet ...	72	19	30	121	21	100

STATEMENT II

Maternal Morbidity (Puerperal) 1920.

——	Eclampsia	Forceps	A P H.	P. P. H.	Sepsis. in C.W.S.	Sepsis. After Barber Women	Sepsis. Saprae mia	Difficult Abnormal Cases. By Nurses	Difficult Abnormal Cases. Sent to Hospital	Malaria	Influenza	Anaemia	Dysentery	V. D. H.	Bronchitis	Tuberculosis Diarrhoea	Tuberculosis T P.	Lymphangitis	Small-pox	Gonorrhoea	Puerperal Mania	Adhereul Placenta	Placenta Praevia	Retained Placenta	Total
Triplicane ...	1	1	2	7	3	7	2	14	107	5	9	16	17	4	1	10	3	1	...	4	1	6	...	...	221
Washermanpet ...	10	...	..	6	5	25	...	39	50	...	2	...	10	..	6	...	3	1	...	...	...	6	1	...	159
Purasawakam ...	4	1	2	2	1	...	11	...	49	3	4	2	16	2	...	3	1	...	1	...	...	...	...	2	104
Total ...	15	2	4	15	9	32	13	53	206	8	15	18	43	6	7	13	7	2	1	4	1	12	1	2	484

Maternal Morbidity (Puerperal) 1919 (October to December).

——	Eclampsia.	Forceps.	A. P. H.	P. P. H.	Sepsis. in C. W. S.	Sepsis. After Barber Woman.	Sepsis. Saprae-mia.	Malaria.	Influenza.	Anaemia.	Dysentery.	V. D. H.	Syphilis.	Difficult Labour.	Bronchitis.	Albuminuria.	Tuberculosis. Diarrhoea.	Tuberculosis. T. P.	Total.
Triplicane ...	...	...	...	...	1	2	1	1	6	1	2	...	1	2	1	...	1	...	19
Washermanpet ...	...	...	...	...	1	...	...	...	...	...	2	...	...	...	...	...	...	...	3
Purasawalkam ...	...	...	...	1	...	...	2	1	...	1	5	...	...	...	3	1	2	...	16
Total ...	...	...	...	1	2	2	3	2	6	2	9	...	1	2	4	1	3	...	38

STATEMENT III

Maternal Mortality (Puerperal) 1920

—	Influenza.	V. D. H.	Tuberculosis. Diarrhoea.	Tuberculosis. T. P.	Pneumonia.	Smallpox.	Ankylo Stomiasis.	Total.
Triplicane ...	2	...	2	...	...	...	...	4
Washermanpet ...	...	1	2	2	1	1	1	8
Purssawalkam ...	1	1	1	1	...	...	1	5
Total ...	3	2	5	3	1	1	2	17

Puerperal cases in the care of C. W. S.	...	4,140
Deaths among these	...	21
Maternal mortality rate	...	·5%

11 out of 21 deaths were due to Tuberculosis ...

Maternal Mortality (Puerperal) 1919 (October to December).

——	Influenzic Pneumonia.	Tubercular Diarrhoea.	Total.
Triplicane ...	...	1	1
Washermanpet ...	1	2	2
Pursawalkam ...	...	...	...
Total ...	1	3	4

STATEMENT IV.

Table showing the total attendance of Children and Mothers at the Child Welfare Centres Triplicane, Washermanpet and Purasawalkam.

From 1st October 1919 to 31st December 1919.	Age.				Total.	Nature of disease.							Total attendance for 3 months	Average daily attendance.	Pregnant women treated at the Centre.
	Under one year.	1 to 5 years.	5 to 12 years.	Women.	Total attendance (new cases)	Respiratory	Alimentary.	Skin Affections.	Influenza.	Ear & Eye diseases.	Syphilis	Other Causes.			
Triplicane	412	282	135	290	1,119	215	96	104	159	81	5	459	2,429	29	102
Washermanpet	51	114	53	164	382	44	81	21	7	18	1	210	662	23	34
Purasawalkam	46	10	9	125	190	32	39	7	15	4	..	93	295	5	31
Total ...	509	406	19	579	1,691	291	216	132	181	103	6	762	3,386	57	167

Table showing the total attendance of Children and Mothers at the Child Welfare Centres Triplicane, Washermanpet and Purasawalkam—1920.

From 1st January to 31st December 1920.	Age.				Total.	Nature of Disease.							Total attendance for the year	Pregnant women treated at the Centre.	Average daily attendance.
	Under one year.	1 to 5 years.	5 to 12 years.	Women.	New Total Attendance	Respiratory	Alimentary.	Skin Affections.	Influenza.	Ear & Eye diseases.	Syphilis	Other Causes.			
Triplicane	2,391	1,161	394	1,556	5,505	1,082	487	424	388	195	15	2,916	9,960	501	38
Washermanpet	559	376	356	1,069	2,363	385	259	202	127	44	7	1,332	3,719	182	16
Purasawalkam	1,129	225	105	1,309	2,768	545	414	248	18	69	7	1,467	4,937	357	19
Total for 1920 ...	4,079	1,762	1,855	3,934	10,636	1,912	1,160	874	583	308	29	5,715	18,616	1,040	73
Total for 1919. ...	1,017	858	316	1,174	3,365	295	139	250	31	37	12	253	8,442	322	24·1
Total for 1918 ...	222	207	52	235	716	77	27	55	14	8	4	37	1,558	116	18

STATEMENT V

Ages of deaths among infants born during 1919.

October 1919 to December 1919.	Total Number of Cases taken.	Still-born.	Premature still-birth.	Deaths within. 10 days.	1 to 3 months.	3 to 6 months.	6 to 12 months.	Total. deaths (excluding Still-births.)	Not traceable.	Number of living children.
Triplicane ...	1,165	41	20	52	54	45	70	221	151	732
Washermanpet ...	92	2	...	5	2	4	7	18	10	64
Purasawalkam ...	138	4	7	9	8	6	5	28	3	96
Total ...	1,397	47	27	66	64	55	82	267	164	892

STATEMENT VI

Causes of deaths among infants born in 1919.

	Number of cases taken.	Still-born.	Premature still-born.	Died within 10 days.	Pneumonia.	Influenza.	Enteritis.	Syphilis.	Pyaemia.	Small-pox.	Causes unknown.	Burns.	Hydro-cephalus.	Rickets.	Bronchitis.	Malnutrition.	Not traceable.	Number of living children.
Triplicane ...	1,165	41	20	52	7	40	41	1	4	4	34	1	..	1	36	...	151	732
Washermanpet ...	92	2	...	5	4	...	7	...	...	...	3	..	...	...	...	...	10	64
Purasawalkam ...	135	4	7	9	1	...	6	...	...	...	7	...	1	..	...	3	3	96
Total ...	1,392	47	27	66	12	40	54	1	4	4	44	1	1	1	36	3	164	892

Total live births in Scheme for infants traceable in the first year of life 1154

Deaths among these 267

	Infantile Mortality in the City of Madras.	Working area of C. W. Scheme	For Infants in the care of C. W. S.
1919	355·5	363·4	276·8
1920	280·4	256·6	231·1

STATEMENT VII

Visits paid by the Staff of the Child Welfare Scheme from October 1919 to December 1920.

Centre.	Midwives.		Health Visitors.		Lady Doctors.	
	Sep. 1918—1919. Sep.	Oct. 1919—1920. Dec.	Sep. 1918—1919 Sep.	Oct. 1919—1920 Dec.	Oct. 1919—1919 Dec.	1919—1920
Triplicane	14,278	23,883	5,500	15,197		
Washermanpet	1,027	12,248	862	8,220		760
Purasawalkam	...	14,512	...	10,250	119	350
Total ...	15,305	50,643	6,362	33,667	119	1,110

Visits paid to abnormal and difficult cases by the Superintendent (in all centres) } 374 in 1920 and 61 (From October to December 1919)

2	Forceps ...	1 Persistent Occipito Posterior	Triplicane	By Superintendent
		1 High Forceps Rickety Pelvis	Purasawalkam	do.
1	Craniotory ...	Hydrocephalus	Triplicane	do.
1	Extraction of after coming head		Triplicane	do.
2	Manual removal of Adherent Placenta		Purasawalkam	do.
6	” ” ”		Washermanpet	Lady Doctor Washermanpet Centre.

STATEMENT VIII.

Table showing details of all births in the Municipal Divisions in which the scheme was working for one year ending with 31-12-1920.

1		2	3	4			5	6			7	8			9	10		
Municipal Divisions and working area.		Total No. of births from 1-1-1920 to 31-12-1920.	No. attended by Corporation midwives.	Percentage to total births.			No. attended by qualified midwives other than Corporation midwives.	Percentage to total births.			No. attended by boiber women	Percentage to total births.			No. delivered in Hospital.	Percentage to total births.		
				1920	1919	1918		1920	1919	1918		1920	1919	1918		1920	1919	1918
Washermanpet Cntre.	2	1,017	91	8·9			4	·4			565	55·5			357	35·1		
	3	1,167	244	20·9							674	57·8			249	21·3		
	4	800	164	20·5							488	61·0			148	18·5		
		2,984	*499	16·7	5·7		4	·14	1·1		1,727	57·9	688		754	25·2	2·32	
Purasawakam Centre.	16	1,202	191	15·9			5	·4			874	72·7			132	11·0		
	17	1,121	206	18·4			13	1·2			743	66·2			159	14·2		
	18	944	238	25 2			6	·63			518	54·9			182	19·3		
	19	895	92	10·3			27	5·02			450	50·3			326	36·4		
	20	1,251	44	3·5			55	4·4			520	41·6			632	50·5		
	21	669	89	13·3			45	6·7			358	53·5			177	26·5		
		6082	860	14·1			151	2·4			3,463	56·9			1,608	26·4		
Triplicane Centre.	23	1,272	84	6·6			18	1·4			824	64·8			346	27 2		
	24	1,283	539	42·0			10	0 8			534	41·6			200	16·4		
	25	653	186	28·5			24	3·7			250	38·3			193	29·5		
	26	669	109	16 3			58	8·6			418	62·5			84	12·6		
	27	873	244	27·9			14	1·6			443	50·7			172	19·7		
	28	860	128	14·9			55	6·4			505	58·7			172	20·0		
	29	844	93	11·0			37	4·4			507	60·1			207	24·5		
		6454	1,383	21·3	16·4	11·9	216	3·3	4·6	12·1	3,481	53·9	56·0	68·4	1,374	21·3	19·2	16·9

Note. (1) A small percentage of births was attended by none

(2) * Excludes 205 cases attended by the Washermanpet staff outside the Washermanpet area.

(3) Column 3 excludes cases treated in the scheme after labour was conducted by barber woman.

(4) 14,027 births occurred in the area of work of the Child Welfare Scheme. Of these 3,828 cases came under the care of the scheme *i.e.* a percentage of 27·29 or roughly 1 out of every 4 births.

Annual Form A.—Meteorological Data—Madras.

Latitude 13° 4′ N.

Longitude 80° 15′ E.

Months.	Barometer. Mean Daily reading.	Reading of Thermometer. Dry. Maximum	Dry. Minimum.	Dry. Mean daily range.	Dry. Mean daily value.	Dew Point. Mean daily value.	Mean Maximum Solar radiation.	Difference between dew point temperature and mean air temperature.	Degree of humidity complete saturation being 100.	Prevailing direction of wind.	Rainfall. Number of days on which rain fell.	Rainfall. Total fall of rain during the month:		Rainfall. Maximum fall of rain during 24 hours.
January 1920 ...	29·985	84·2	69·9	14·3	76·8	68·1	145·9	8·7	77	N. E	6	5·66		2·89
February ,, ...	·961	88·0	70·9	17·1	79·2	68·1	151·9	11·1	73	S.E.by E.	...	...	5·66	...
March ,, ...	·886	89·9	73·7	16·2	81·9	71·0	153·2	10·9	73	S E.by S.	...	....		...
April ,, ...	·832	93·0	77·7	15·3	84·6	74·0	154·8	10·6	74	S.E.by S.	1	0·06		0·06
May ,, ...	·737	99·4	80·9	18·5	87·5	73·6	151·3	13·9	68	S.by E.	3	1·25	1·92	0·84
June ,, ...	·689	100·2	81·4	18·8	88·0	70·8	146·3	17·2	61	S. S. W.	6	0·61		0·22
July ,, ...	·710	99·5	80·6	18·9	87·6	70·2	147·6	17·4	60	SW by W.	14	2·19		0·39
August ,, ...	·762	95·3	78·5	16·8	85·0	70·4	147·7	14·6	65	S.W.	9	2·09	4·75	1·15
September ,, ...	·759	95·7	78·8	16·9	85·4	71·6	155·4	13·8	67	S S.W	5	0·47		0·23
October ,, ...	·839	89·5	76·5	13·0	81·8	73·6	139·7	8·2	79	E.S.E.	16	21·47		7·61
November ,, ...	·877	84·5	74·2	10·3	78·6	72·5	133·0	6·1	84	N.E.byN.	17	30·08	51·56	5·95
December ,, ...	·964	84·6	68·3	16·3	75·8	64·9	148·0	10·9	71	N.E	1	0·01		0·01
	29·833	29·0	75·9	16·0	82·7	....	147·9	....	71	S.E.by S.	78	63·89		...

Annual Form No. 1.—Births registered by divisions during the year 1920.

1	2	3			4			5			6	7	8	9			10	11
Divisions.	Districts.	Population according to census of 1911.			No. of Births registered.			Ratio of Births per 1,000 of Population.			Number of Males born to every 100 Females born.	Excess of births over deaths per 1,000 of Population.	Excess of deaths over births per 1,000 of Population.	Mean ratio of Births per 1,000 during previous five years.			Still-births.	*Ill-gitimate births.
		Males.	Females.	Total.	Males	Females.	Total.	Males	Females,	Total				Males.	Females.	Total.		
1	Royapuram ...			...	476	422	898	...	...	...	112·8	...	...				29	26
2	Tondiarpet ...			...	504	454	958	...	...	...	111·0	...	...				59	14
3	Washermanpet ...			...	557	563	1,120	...	...	...	98·9	...	...				47	42
4	Korukupet ...			...	406	362	768	...	...	...	112.2	...	...				32	34
5	Harbour ...			...	146	117	263	...	...	...	124·8	...	...				6	...
6	Muthialpet ...			...	146	142	288	...	...	...	102·8	...	...				11	3
7	Katchaleswarenpet ...			...	234	192	426	...	...	...	121·9	...	...				16	12
8	Kothawal Bazaar ...			...	67	71	138	...	...	...	94·4	...	...				5	2
9	Ammen Kovil ...			...	352	348	700	...	...	...	101·1	...	...				35	23
10	Seven Wells ...			...	335	340	675	...	...	...	98·5	...	...				40	40
11	Sowcarpet ...			...	86	91	177	...	...	...	94·5	...	...				12	10
12	Peddunaickenpet ...			...	371	309	680	...	...	...	120·0	...	...				25	18
13	Trevelyan Basin ...			...	302	295	597	...	...	...	102·4	...	...				30	38
14	Esplanade ...			...	33	39	72	...	...	...	84·6	...	...				9	2
15	Park Town ...			...	291	245	536	...	...	...	118·8	...	...				32	13
16	Perambur ...			...	558	519	1,077	...	...	...	107·5	...	...	Not Available.	Not Available.	Not Available.	125	30
17	Chulai ...			...	550	525	1,075	...	...	...	104·8	...	...				46	48
18	Purasawalkam ...			...	439	442	881	...	...	...	99·3	...	...				63	12
19	Vepery ...			...	449	418	867	...	...	...	107·4	...	...				28	32
20	Egmore ...			...	600	552	1,152	...	...	...	108·7	...	...				99	10
21	Kilpauk ...				321	316	637				101·6						32	18
22	Nungambakam ...				363	320	683				113·4						32	37
23	Chintadripet ...				662	559	1,221				118·4						51	49
24	Tiruvateswarenpet ...				608	622	1,230				97·8						53	55
25	Chepauk ...				312	304	616				102·6						37	11
26	Triplicane ...				324	315	639				102·9						30	53
27	Amir Mahal ...				421	402	823				104·7						50	12
28	Mirsahibpet ...				426	391	817				109·0						43	17
29	Royapettah ...				408	375	783				108·8						61	35
30	Mylapore ...				316	283	599				111·7						34	16
	Total ...	266,465	252,195	518,660	11,063	10,333	21,396	41·5	41·0	41·3	107·1	...	0·4	39·1	39·7	39·4	1,172	712

Population for new Municipal Divi ions not being available in the year 1920, Birth-rate for each division cannot be calculated for items 5, 7, 8 and 9.
* Included in the total births shown in columns Nos. 4 & 10.

Annual Form No. II.—Statement of Deaths by divisions during the year 1920.

1	2	3	4	5			6			7
Divisions.	Districts.	Area in square miles.	Average population per square mile.	Population according to the census of 1911.			No. of Deaths registered.			Number of deaths of males to every 100 deaths of Females.
				Males.	Females	Total.	Males	Fe-males.	Total.	
1	Royapuram ...						409	423	832	94·3
2	Tondiarpet ...						765	542	1,307	141.1
3	Washermanpet ...						521	511	1,032	101·9
4	Korukupet ...						330	315	645	104·9
5	Harbour ...						190	160	350	118·8
6	Muthialpet ...						189	195	384	96·9
7	Katchaleswarenpet ...						254	241	495	105.4
8	Kothawal Bazaar ...						107	107	214	100.0
9	Ammen Kovil ...						407	418	825	97.4
10	Seven Wells ...						401	427	828	93·9
11	Sowcarpet ...						160	147	307	108·9
12	Peddunaickenpet ...						397	424	821	93·6
13	Trevelyan Basin ...						374	415	789	90·1
14	Esplanade ...						249	116	365	214·6
15	Park Town ...						365	349	714	104·6
16	Perambur ...						500	474	974	105·5
17	Chulai ...						461	478	939	96·4
18	Purasawalkam ...						400	379	779	105·5
19	Vepery ...						374	394	768	94 9
20	Egmore ...						416	444	860	93·7
21	Kilpauk ...						355	314	669	113·1
22	Nungambakam ...						298	305	603	97·7
23	Chintadripet ...						536	558	1,094	96·1
24	Tiruvatteeswaranpet ...						529	490	1,019	107·9
25	Chepauk ...						281	258	539	108·9
26	Triplicane ...						258	268	526	96·3
27	Amirmahal ...						334	360	694	92·8
28	Mirsahibpet ...						386	352	738	109.7
29	Royapettah ...						359	357	716	100·6
30	Mylapore ...						305	287	592	186·4
	Total ...	27·6	18,792	266,465	252,195	518,660	10,910	10,508	21,418	103·8

	8															9		
	Deaths per 1,000 of Population from															Mean ratio of Deaths per 1,000 during previous five years.		
	Cholera.	Small-pox.	Measles.	Plague.	Malaria.	Enteric Fever.	Other Fevers.	Dysentery & Diarrhoea.	Tubercle.	Respiratory Diseases.	Injuries.	All other Causes.	All Causes. Males.	All Causes. Females.	All Causes. Total.	Males.	Females.	Total.
Total ...	0 04	0·2	0·08	0 02	1·1	0·1	3·4	9·0	1 9	6·6	0·6	18·2	40·1	41·7	41·3	42·8	45 9	44·3

Population for new Municipal Divisions not being available in the year 1920, death-rate for each division cannot be calculated for item 8 and 9.

Annual Form No. III.—Deaths registered by divisions during each month of the year 1920.

1	2	3												4
Divisions.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total Deaths registered during the year.
1	Royapuram ...	96	62	69	74	82	65	67	67	51	50	69	80	832
2	Tondiarpet ...	105	115	94	91	84	101	109	81	99	119	151	158	1,307
3	Washermanpet ...	119	119	97	79	64	55	73	71	63	74	99	119	1,032
4	Korukupet ...	79	52	66	42	39	38	46	47	51	49	65	71	645
5	Harbour ...	34	34	26	24	18	28	22	39	29	28	32	36	350
6	Muthialpet ...	35	28	36	24	30	27	21	25	31	36	47	44	384
7	Katchaleswaranpet ...	50	31	45	39	48	21	36	32	43	40	52	58	495
8	Kothawal Bazaar ...	29	12	19	18	18	13	16	17	10	20	20	22	214
9	Ammen Kovil ...	79	71	64	60	54	47	56	43	61	72	95	123	825
10	Seven Wells ...	101	71	73	66	63	63	53	65	51	57	70	95	828
11	Sowcarpet ...	37	29	39	15	23	21	21	17	19	29	31	26	307
12	Peddunaickenpet ...	75	68	81	61	59	51	66	63	53	67	79	98	821
13	Trevelyan Basin ...	78	65	81	64	66	59	55	51	62	57	59	92	789
14	Esplanade ...	45	28	42	30	26	28	25	28	16	26	40	31	36[illegible]
15	Park Town ...	80	57	62	61	49	45	53	66	41	52	64	84	714
16	Perambur ...	105	118	102	64	62	70	62	60	67	75	91	98	974
17	Chulai ...	123	86	96	67	80	52	64	65	59	70	75	102	939
18	Purasawakam ...	77	79	73	58	58	58	52	58	58	55	69	84	779
19	Vepery ...	87	84	77	50	77	49	44	53	47	51	72	77	768
20	Egmore ...	97	72	67	80	53	72	64	58	59	56	83	99	860
21	Kilpauk ...	73	64	68	48	38	48	49	60	53	57	50	61	669
22	Nungambakam ...	71	50	54	44	45	47	36	45	38	47	63	63	603
23	Chintadripet ...	118	65	85	104	100	86	69	84	88	102	93	100	094
24	Tiruvatteeswaranpet ...	94	68	103	71	82	87	63	75	76	80	92	128	1,019
25	Chepauk ...	63	45	48	40	26	50	26	37	44	32	53	75	1,539
26	Triplicane ...	46	40	38	37	51	44	38	28	40	38	58	68	526
27	Amir Mahal ...	62	67	52	67	49	53	44	44	61	46	78	71	694
28	Mirsahibpet ...	77	66	61	54	52	51	56	49	52	66	71	83	738
29	Royapettah ...	69	65	64	52	62	46	44	46	50	60	83	75	716
30	Mylapore ...	50	52	46	45	58	43	41	40	39	51	62	65	592
	Total ...	2,254	1,863	1,928	1,629	1,616	1,518	1,471	1,514	1,511	1,662	2,066	2,386	21,418

Annual Form No. IV.—Deaths registered according to age by divisions during the year 1920.

1	2	3		4		5		6		7		8		9		10		11		12	
	Districts.	Under 1 year.		1 year and under 5 years.		5 years and under 10 years.		10 years and under 15 years.		15 years and under 20 years.		20 years and under 30 years		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 years and upwards.	
		Males.	Females.	Males.	Females.	Males.	Females	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	Rayapuram ...	170	125	69	96	13	19	7	8	2	14	19	25	18	13	21	13	23	21	67	89
2	Tondiarpet ...	143	123	100	82	22	18	13	14	17	14	97	59	111	54	85	34	62	31	115	113
3	Washermanpet ...	159	152	77	100	25	25	9	10	15	11	32	38	39	34	32	23	32	18	101	100
4	Korukupet ...	109	91	52	55	18	9	5	5	6	14	26	34	24	22	20	17	24	15	46	53
5	Harbour ...	57	52	31	23	7	7	2	4	1	3	18	19	19	15	14	4	11	3	30	30
6	Muthialpet ...	46	44	29	26	7	3	6	7	6	8	10	29	12	14	18	11	20	14	35	39
7	Katchaleswaranpet ...	75	59	43	41	5	12	6	4	8	11	26	24	23	23	14	19	13	13	41	35
8	Kothaval bazaar ...	28	28	12	11	6	4	2	4	5	4	12	12	9	8	11	9	7	7	15	20
9	Ammen kovil ...	126	103	67	60	15	28	4	13	9	8	27	30	25	27	21	28	26	31	87	90
10	Seven wells ...	142	94	64	61	14	17	6	6	8	25	15	48	27	24	34	26	25	34	66	92
11	Sowcarpet ...	51	39	19	22	5	5	4	4	7	7	10	10	6	14	12	9	19	12	27	25
12	Peddu Naickenpet ...	115	112	73	68	16	15	9	12	9	19	32	42	18	27	22	34	35	25	68	70
13	Trevelyan Basin ...	107	110	66	70	19	16	5	3	7	16	26	43	40	29	21	24	30	31	53	73
14	Esplanade ...	18	18	12	14	2	6	12	7	14	4	47	21	45	14	38	9	31	10	30	13
15	Park Town ...	102	77	49	49	11	14	5	9	6	17	18	30	36	23	32	25	34	22	72	83
16	Perambur ...	113	115	96	102	39	28	23	16	16	16	30	39	28	28	43	22	33	27	79	81
17	Chulai ...	147	135	73	92	17	25	8	14	9	18	42	35	34	27	30	16	23	25	78	91
18	Purasawalkam ...	108	111	77	74	20	27	18	14	9	15	20	25	20	22	20	16	37	12	71	63
19	Vepery ...	111	91	56	90	20	25	10	12	7	13	24	45	32	19	21	13	18	17	75	69
20	Egmore ...	146	123	70	80	12	14	7	9	7	14	27	64	31	38	24	13	29	12	63	77
21	Kilpauk ...	87	79	67	48	13	13	2	8	3	16	28	25	40	31	34	15	23	20	58	59
22	Nungambakkam ...	87	73	51	69	19	8	3	7	5	10	21	27	24	16	20	13	14	15	54	67
23	Chintadripet ...	177	163	98	118	18	23	14	9	9	29	37	44	25	41	36	29	32	22	90	80
24	Tiruvatteeswarenpet ...	153	154	85	73	25	19	11	10	12	24	35	39	37	24	34	30	32	12	105	105
25	Chepauk ...	89	79	42	30	9	13	2	8	5	13	21	18	14	29	19	12	21	14	59	42
26	Tiriplicane ...	77	74	43	44	8	11	3	9	5	7	17	23	15	15	22	15	23	17	45	53
27	Amir Mahal ...	109	105	61	63	11	15	4	7	8	10	32	38	20	24	24	13	14	11	51	74
28	Mirsahibpet ...	128	103	65	88	14	18	12	6	5	3	28	30	26	21	21	14	25	12	62	57
29	Royapettah ...	94	94	69	71	29	20	12	12	9	12	25	31	27	29	10	17	21	14	63	57
30	Mylapore ...	99	77	56	62	15	11	4	8	7	5	21	14	18	21	16	18	16	10	53	61
	Total ...	3,173	2,803	1,772	1,882	454	468	228	259	236	380	823	961	843	726	769	541	753	527	1,859	1961
	Ratio per 1,000	286·8	271·3	81·5	85·0	15 8	16·1	8.2	10·3	9·5	14·7	1 5·3	18·8	20·5	21·1	24 9	20·2	42·4	32·0	141·1	153·3

In the case of children under one year of age, the ratios are calculated on the number of live-births during the year, in all other cases on the number living at the time of the census of 1911.

Annual Form No. V:—Deaths registered according to class by divisions during the year 1920.

1	2	3					4					5				
		Population (according to Census of 1911.)					Number of deaths registered.					Ratio of deaths per 1,000 of Population.				
Divisions.	Districts.	Christians.	Hindus.	Mahomedans.	Others.	Total.	Christians.	Hindus.	Mahomedans.	Others.	Total.	Christians.	Hindus.	Mahomedans	Others.	Total.
1	Royapuram						166	603	63	...	832					
2	Tondiarpet						49	1,129	129	...	1,307					
3	Washermanpet						33	925	74	...	1,032					
4	Korukupet						10	541	94	...	645					
5	Harbour						2	107	241	...	350					
6	Muthialpet						5	354	25	...	384					
7	Katchaleswaranpet ...						42	417	35	1	495					
8	Kothawal Bazaar						4	195	15	...	214					
9	Ammen Kovil						77	581	167	...	825					
10	Seven Wells						45	736	47	...	828					
11	Sowcarpet						1	305	1	...	307					
12	Peddunaickenpet						1	810	10	...	821					
13	Trevelyan Basin						...	784	5	...	789					
14	Esplanade						41	304	20	...	365					
15	Park Town						29	684	1	...	714					
16	Perambur						29	754	191	...	974					
17	Chulai						23	893	23	...	939					
18	Purasawakam						88	673	18	...	779					
19	Vepery						119	593	56	...	768					
20	Egmore						129	629	99	3	860					
21	Kilpauk						69	571	29	...	669					
22	Nungambakam						67	471	63	2	603					
23	Chintadripet						87	964	42	1	1,094					
24	Tiruvatteeswaranpet ...						12	614	393	...	1,019					
25	Chepauk						8	320	211	...	539					
26	Triplicane						2	504	20	...	526					
27	Amir Mahal						20	363	310	1	694					
28	Mirsahibpet						21	509	208	...	738					
29	Royapettah						54	600	59	3	716					
30	Mylapore						93	479	20	...	592					
	Total ...	41,812	415,910	59,169	1,769	518,660	1,326	17,412	2,669	11	21,418	31·7	41·9	45·1	6·2	41·3

Population for new Municipal Divisions not being available in the year 1920, the death-rate for each division cannot be calculated for item 5.

Annual Form No. VI.—Deaths registered from "Cholera" by divisions during each month of the year 1920.

1	2	3												4			5			6
Divisions.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of Population.			Mean ratio per 1,000 during previous five years.
														Males.	Females.	Total.	Males.	Females.	Total.	
1	Royapuram ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	Tondiarpet ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Washermanpet ...	1	...	...	...	...	...	...	...	...	1	...	...	2	...	2	...	...	...	...
4	Korukupet ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Harbour ...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
6	Muthialpet ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	Katchaleswaranpet ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Kothawal Bazaar ...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...	...	...	...
9	Ammen Kovil ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	Seven Wells ...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
11	Sowcarpet ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	Peddunaickenpet ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	Trevelyan Basin ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	Esplanade ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	Park Town ...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
16	Perambur ...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
17	Chulai ...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
18	Purasawakam ...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
19	Vepery ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	Egmore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	Kilpauk ...	...	...	2	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...
22	Nungambakam ...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...
23	Chintadripet ...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	...	...	...
24	Tiruvatteesvaranpet ...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
25	Chepauk ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	Triplicane ...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
27	Amir Mahal ...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	...	...
28	Mirsahibpet ...	...	...	2	...	1	...	...	...	...	...	...	...	2	1	3	...	...	...	...
29	Royapettah ...	...	...	1	...	...	1	...	...	...	...	...	...	1	1	2	...	...	...	...
30	Mylapore ...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	...	...	...
	Total ...	3	2	7	2	1	1	...	1	...	3	...	2	15	7	22	0·06	0·03	0·04	0·5

Population for new Municipal Divisions not being available in the year 1920, death-rate for each division cannot be calculated for items 5 and. 9

Annual Form No. VII.—Deaths registered from "Small-pox" by divisions during each month of the year 1920.

1	2	3												4			5			6
Divisions.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Ratio of deaths per 1,000 of Population. Males.	Ratio of deaths per 1,000 of Population. Females.	Ratio of deaths per 1,000 of Population. Total.	Mean ratio per 1,000 during previous five years.
1	Royapuram ...	1	1	2	2	2	...	1	1	1	1	3	1	6	10	16	...	...	...	...
2	Tondiarpet ...	5	...	...	1	...	...	...	...	2	2	2	...	6	6	12	...	...	...	...
3	Washermanpet ...	2	...	1	2	2	1	2	1	1	1	...	...	5	8	13	...	...	...	...
4	Korukupet ...	...	...	...	...	3	1	...	...	...	...	...	...	3	1	4	...	...	...	...
5	Harbour ...	...	...	...	...	...	...	...	...	1	1	...	...	2	...	2	...	...	...	...
6	Muthialpet ...	1	2	2	...	...	...	...	1	2	...	1	1	5	5	10	...	...	...	...
7	Katchaleswaranpet ...	...	...	1	4	2	...	...	...	1	...	1	...	6	3	9	...	...	...	...
8	Kothawal Bazaar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	Ammen Koil ...	...	...	1	1	...	...	...	...	1	1	...	...	3	1	4	...	...	...	...
10	Seven Wells ...	1	...	1	2	...	...	...	...	...	...	...	...	2	2	4	...	...	...	...
11	Sowcarpet ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	Peddunaickenpet ...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...
13	Trevelyan Basin ...	...	1	3	2	...	...	...	...	...	...	...	...	3	3	6	...	...	...	...
14	Esplanade ...	...	...	...	1	...	...	...	1	...	...	...	...	2	...	2	...	...	...	...
15	Park Town ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	Perambur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	Chulai ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	Purasawakam ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	Vepery ...	...	...	2	...	...	...	...	...	...	...	...	...	2	...	2	...	...	...	...
20	Egmore ...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
21	Kilpauk ...	...	...	1	1	3	...	1	...	...	...	...	...	4	2	6	...	...	...	...
22	Nungambakam ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	Chintadripet ...	...	2	...	1	...	1	...	...	...	...	...	...	2	2	4	...	...	...	...
24	Tiruvateswaranpet ...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
25	Chepauk ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	Triplicane ...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
27	Amir Mahal ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	m
28	Mirsahibpet ...	...	1	...	3	1	1	1	...	...	...	...	...	5	2	7	...	...	...	...
29	Royapettah ...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...
30	Mylapore ...	...	1	2	...	...	...	...	...	...	...	...	...	3	...	3	...	...	...	...
	Total ...	10	9	17	21	15	4	5	4	9	6	7	2	62	47	109	0·2	0·2	0·2	0·5

Population for new Municipal Divisions not being available in the year 1920, death-rate for each division cannot be calculated for items 5 and 6.

Annual Form No. VIII—Deaths registered from "Measles" by divisions during each month of the year 1920.

1	2	3												4			5			6
Divisions	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October	November.	December.	Total. Males.	Total. Females.	Total. Total.	Ratio of deaths per 1,000 of population. Males.	Ratio of deaths per 1,000 of population. Females.	Ratio of deaths per 1,000 of population. Total.	Mean Ratio per 1000 during the pervious 5 years.
1	Royapuram ...	2	1	3	2	1	...	...	...	...	...	...	...	4	5	9	...	...	...	...
2	Tondiarpet ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Washermanpet ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	Korukupet ...	...	...	1	1	...	...	...	...	...	...	...	1	1	2	3	...	...	...	...
5	Harbour ...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	...	...	...	...
6	Muthialpet ...	...	...	2	...	...	...	...	...	...	...	...	...	1	1	2	...	...	...	...
7	Kachaleswaranpet ...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...
8	Kothwal Bazaar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	Ammen Koil ...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	...	...	...	...
10	Seven Wells ...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
11	Sowcarpet ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	Peddunaickenpet ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	Trevelyan Basin ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	Esplanade ...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	...	...	...
15	Park Town ...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
16	Perambur ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	Chulai ...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
18	Purasawakam ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	Vepery ...	1	1	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	...	...
20	Egmore ...	...	...	1	...	...	...	1	...	1	...	...	1	4	...	4	...	...	...	...
21	Kilpauk ...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
22	Nungambakkam ...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
23	Chintadripet ...	...	2	1	...	...	1	...	...	...	...	...	...	2	2	4	...	...	...	...
24	Tiruvatteeswaranpet ...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...	...	...	...
25	Chepauk ...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
26	Triplicane ..	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
27	Amir Mahal ...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
28	Mirsahibpet ...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
29	Royapettah .	...	...	...	1	2	...	...	...	...	...	...	...	2	1	3	...	...	...	...
30	Mylapore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total ...	5	6	10	7	4	1	2	...	1	...	3	2	22	19	41	0·08	0·08	0·08	0·3

Population for new Municipal Divisions not being available in the year 1920, death-rate for each division cannot be calculated for items 5 and 6.

3—A.

Annual Form No. IX—Deaths Registered from "Plague" by divisions during each month of the year 1920.

1	2	3												4			5			6
Divisions.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Ratio of deaths per 1,000 of population. Males.	Females.	Total.	Mean ratio per 1,000 during previous five years.
1	Royapuram	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	Tondiarpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Washermanpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	Korukupet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Harbour	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	Muthialpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	Katchaleswaranpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Kothawal Bazaar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	Amman Koil	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	Seven Wells	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	Sowcarpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	Peddunaikenpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	Trevelyan Basin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	Esplanade	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	Park Town	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	Perambur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	Chulai	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	...	...
18	Purasawalkam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	Vepery	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	...	...
20	Egmore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	Kilpauk	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	Nungambaukam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	Chintadripet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	Tiruvateswaranpet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	Chepauk	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...
26	Triplicane	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	Amir Mahal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28	Mirsahibpet	...	2	...	...	...	...	...	...	...	...	...	3	4	1	5	...	...	...	...
29	Royapettah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	Mylapore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total ...	...	2	...	...	...	...	...	...	...	...	...	6	6	2	8	0·02	0·008	0·02	0·02

Population for new Municipal Divisions not being available in the year 1920, death-rate for each division cannot be calculated for items 5 and 6.

Annual Form No. X—Deaths registered from "Malaria" by divisions during each month of the year 1920.

1	2	3												4			5			6
														Total.			Ratio of deaths per 1,000 of Population.			
Divisions.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.	Mean ratio per 1,000 during previous five years.
1	Royapuram ...	2	4	3	3	3	2	1	3	2	5	3	4	15	20	35	...	...	...	...
2	Tondiarpet ...	3	8	2	5	3	3	5	3	4	4	7	8	34	21	55	...	...	...	...
3	Washermanpet ...	3	1	4	2	...	1	...	...	...	...	...	1	7	5	12	...	...	...	...
4	Korukupet ...	4	3	1	...	...	...	...	...	...	...	...	...	4	4	8	...	...	...	...
5	Harbour ...	1	3	1	1	2	...	2	2	...	...	1	1	6	8	14	...	...	...	...
6	Muthialpet ...	1	1	2	...	...	1	2	1	...	...	1	...	5	4	9	...	...	...	...
7	Katchaleswaranpet ...	3	...	1	...	1	...	1	1	1	1	...	...	4	5	9	...	...	...	...
8	Kothawal Bazaar ...	3	1	...	4	1	...	2	4	...	2	1	2	4	16	20	...	...	...	...
9	Amman Koil ...	4	3	4	6	1	2	1	7	2	4	4	6	24	20	44	...	...	...	...
10	Seven Wells ...	7	9	2	6	6	4	1	2	2	3	3	10	27	28	55	...	...	...	...
11	Sowcarpet ...	3	1	4	...	3	...	2	1	2	3	1	3	9	14	23	...	...	...	...
12	Peddunaikpet ...	2	...	4	1	...	1	...	...	...	1	1	3	4	9	13	...	...	...	...
13	Trevelyan Basin ...	...	3	5	3	1	2	2	1	...	...	...	3	11	9	20	...	...	...	...
14	Esplanade ...	3	1	4	...	1	...	1	1	...	...	1	2	8	6	14	...	...	...	...
15	Park Town ...	2	1	4	...	2	1	...	3	1	2	3	2	13	8	21	...	...	...	...
16	Perambur ...	3	5	...	1	1	1	...	2	...	1	2	2	10	8	18	...	...	...	...
17	Chulai ...	2	...	...	...	2	...	...	1	1	...	...	2	5	3	8	...	...	...	...
18	Purasawalkam ...	...	1	1	1	3	1	1	1	...	1	2	3	6	9	15	...	...	...	...
19	Vepery ...	...	1	1	...	...	...	...	...	1	...	...	...	3	...	3	...	...	...	...
20	Egmore ...	4	2	2	3	4	5	3	1	2	1	3	4	17	17	34	...	...	...	...
21	Kilpauk ...	3	1	3	3	1	1	...	4	2	1	...	1	9	11	20	...	...	...	...
22	Nungambakam ...	...	4	1	...	...	...	...	...	...	1	2	...	4	4	8	...	...	...	...
23	Chintadripet ...	6	3	3	1	2	3	4	3	1	2	...	2	10	20	30	...	...	...	...
24	Tiruvateswaranpet ...	4	2	5	4	4	2	2	...	1	...	1	6	18	13	31	...	...	...	...
25	Chepauk ...	1	1	...	...	...	...	...	...	...	...	1	2	1	4	5	...	...	...	...
26	Triplicane ...	1	...	1	1	1	...	...	...	1	1	...	2	4	4	8	...	...	...	...
27	Amir Mahal ...	...	1	...	...	1	1	...	1	...	...	...	...	2	2	4	...	...	...	...
28	Mirsahibpet ...	3	3	...	1	...	1	...	...	...	...	1	...	4	5	9	...	...	...	...
29	Rayapettah ...	2	1	1	2	2	1	...	3	...	...	1	1	7	7	14	...	...	...	...
30	Mylapore ...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
	Total ...	70	65	59	48	45	33	30	45	23	33	39	70	275	285	560	1·0	1·1	1·1	1·9

Population for new Municipal divisions not being available in the year 1920, death-rate for each division cannot be calculated for items 5 and 6.

Annual Form No. XI—Deaths registered from "Enteric Fever" by divisions during each month of the year 1920.

1	2	3												4			5			6
Divisions.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of Population,			Mean ratio per 1,000 during previous five years.
														Males.	Females.	Total.	Males.	Females.	Total.	
1	Royapuram ...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	...	...	...
2	Tondiarpet ...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
3	Washermanpet ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	Korukkupet ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Harbour ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	Muthialpet ...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
7	Katchaleswaranpet ...	...	...	...	...	...	...	...	1	...	...	1	...	2	...	2	...	...	...	...
8	Kothawal Bazaar ...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1	...	...	...	...
9	Amman Koil ...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...
10	Seven Wells ...	...	1	...	...	...	...	...	...	...	1	...	...	1	1	2	...	...	...	...
11	Sowcarpet ...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	...	...	...	...
12	Peddunaikpet ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	Trevelyan Basin ...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
14	Esplanade ...	...	1	1	1	3	...	1	...	...	...	...	1	7	1	8	...	...	...	...
15	Park Town ...	...	...	...	1	...	...	...	...	...	1	...	1	2	1	3	...	...	...	...
16	Perambur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	Chulai ...	...	...	1	...	...	...	2	...	1	...	...	...	3	1	4	...	...	...	...
18	Purasawakam ...	...	1	1	...	1	...	...	...	...	...	...	...	2	1	3	...	...	...	...
19	Vepery ...	...	1	2	1	1	...	...	...	...	...	...	...	4	1	5	...	...	...	...
20	Egmore ...	1	1	...	1	1	...	...	...	...	...	1	...	2	3	5	...	...	...	...
21	Kilpauk ...	...	1	...	1	...	...	...	...	...	...	1	...	2	1	3	...	...	...	...
22	Nungambakam ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	Chintadripet ...	...	...	1	...	...	...	...	...	1	1	...	...	2	1	3	...	...	...	...
24	Tiruvateswaranpet ...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	...	...
25	Chepauk ...	...	...	...	1	...	...	...	...	1	1	...	...	1	2	3	...	...	...	...
26	Triplicane ...	...	...	...	...	...	1	...	...	1	...	...	...	2	...	2	...	...	...	...
27	Amir Mahal ...	...	1	...	2	...	...	1	...	1	1	...	...	3	3	6	...	...	...	...
28	Mirsahibpet ...	...	...	1	...	...	...	...	...	...	1	...	...	1	1	2	...	...	...	...
29	Rayapettah ...	...	...	...	...	...	...	...	...	1	1	1	1	3	1	4	...	...	...	...
30	Mylapore ...	...	...	...	1	...	1	...	...	...	1	...	...	1	2	3	...	...	...	...
	Total ...	1	7	8	11	6	3	4	1	6	9	5	5	41	25	66	0·2	0·1	0·1	0·1

Population for new Municipal Divisions not being available in the year 1920, death-rate for each division cannot be calculated for items 5 and 6.

Annual Form No. XII—Deaths registered from "other fevers" by divisions during each month of the year 1920.

1	2	3												4			5			6
Divisions.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of Population.			Mean ratio per 1,000 during previous five years.
														Males.	Females.	Total.	Males.	Females	Total.	
1	Royapuram	8	1	2	9	8	9	7	9	4	1	2	4	23	41	64	...			
2	Tondiarpet	5	9	5	7	4	9	6	3	8	5	9	11	44	37	81	...			
3	Washermanpet	25	23	12	9	7	11	13	11	5	9	10	15	73	77	150	...			
4	Korukupet	12	7	13	3	4	7	5	9	13	8	4	11	36	60	96	...			
5	Harbour	2	2	1	...	...	2	1	1	...	...	...	1	5	5	10	...			
6	Muthialpet	3	1	1	...	1	...	1	1	1	3	2	...	3	11	14	...			
7	Katchaleswaranpet	2	2	...	2	3	2	...	5	...	1	1	1	4	15	19	...			
8	Kothawal Bazaar	1	...	2	2	2	1	...	1	...	4	3	5	8	13	21	...			
9	Amman Koil	2	3	3	3	2	9	4	3	8	6	6	13	21	41	62	...			
10	Seven Wells	2	...	1	7	5	5	1	5	10	2	10	17	19	46	65	...			
11	Sowcarpet	7	...	4	...	2	2	2	1	2	4	3	2	13	16	29	...			
12	Peddunaickenpet	6	3	5	6	5	1	7	...	3	3	6	5	18	32	50	...			
13	Trevelyan Basin	7	3	5	3	4	6	6	2	5	4	6	7	27	31	58	...			
14	Esplanade	5	6	4	4	4	7	1	2	3	2	3	1	33	9	42	...			
15	Park Town	7	7	14	10	9	10	5	6	3	3	4	7	35	50	85	...			
16	Perambur	...	4	...	5	1	2	2	1	...	2	3	...	14	6	20	...			
17	Chulai	7	2	3	1	3	...	1	...	...	1	1	...	11	8	19	...			
18	Purasawakam	2	2	2	2	...	1	2	1	...	...	2	1	9	6	15	...			
19	Vepery	4	...	...	1	4	2	1	...	1	2	1	4	8	12	20	...			
20	Egmore	2	2	1	1	...	7	4	1	4	5	5	4	15	21	36	...			
21	Kilpauk	2	1	4	...	...	...	...	4	2	1	3	1	8	10	18	...			
22	Nungambakam	13	7	7	8	4	7	3	1	6	6	7	3	34	38	72	...			
23	Chintadripet	20	12	9	10	9	3	5	11	11	10	16	15	49	82	131	...			
24	Tiruvateswaranpet	14	3	9	10	6	8	7	8	2	6	5	7	41	44	85	...			
25	Chepauk	3	4	2	3	1	11	2	2	5	5	7	13	30	28	58	...			
26	Triplicane	3	2	7	3	6	11	8	1	6	4	9	7	28	39	67	...			
27	Amir Mahal	9	3	5	14	5	9	3	7	7	5	6	10	41	42	83	...			
28	Mirsahibpet	6	9	12	12	9	10	11	8	9	9	4	19	57	61	118	...			
29	Royapetta	7	7	4	4	3	2	2	6	7	14	10	9	41	34	75	...			
30	Mylapore	15	6	5	12	8	13	11	7	13	12	7	8	66	51	117	...			
	Total ...	201	181	142	151	119	167	121	117	138	137	155	201	814	966	1,780	3·1	3·8	3·4	3·4

Population for new Municipal divisions not being available in the year 1920, death rate for each division cannot be calculated for items 5 and 6.

Annual Form No. XIII—Deaths registered from "Dysentery and Diarrhoea" by divisions during each month of the year 1920.

1	2	3												4			5			6
Divisions.	Districts,	January,	February.	March.	April	May.	June.	July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population			Mean ratio per 1,000 during previous five years
														Males.	Females.	Total.	Males.	Females.	Total,	
1	Royapuram ...	15	9	16	18	16	17	19	15	10	12	8	12	79	88	167	...			
2	Tondiarpet ...	25	29	24	18	22	16	20	19	27	31	38	35	174	130	304	...			
3	Washermanpet ...	31	35	21	18	15	15	15	21	9	12	22	17	114	117	231	...			
4	Korukupet ...	20	16	19	14	8	6	17	10	8	10	19	12	94	65	159	...			
5	Harbour ...	5	6	4	3	2	3	4	9	7	6	7	8	37	27	64	...			
6	Muthialpet ...	6	4	3	5	2	2	1	2	2	7	8	6	24	24	48	...			
7	Katchaleswaranpet ...	9	5	8	5	4	2	4	2	4	7	5	11	35	31	66	...			
8	Kothawal Bazaar ...	5	2	3	2	2	2	3	3	...	2	5	3	16	15	31	...			
9	Ammen Kovil ...	13	11	13	11	10	7	11	7	12	15	19	15	69	75	144	...			
10	Seven Wells ...	13	14	12	6	8	13	10	11	10	8	9	13	61	66	127	...			
11	Sowcarpet ...	5	9	7	3	4	2	...	6	1	5	3	4	29	20	49	...			
12	Peddunackanpet ...	16	20	8	12	12	10	17	17	8	12	15	19	83	83	166	...			
13	Trevelyan Basin ...	18	15	15	9	9	16	13	11	6	8	9	21	70	80	150	...			
14	Esplanade ...	4	4	1	3	2	3	...	1	...	3	3	3	14	13	27	...			
15	Park Town ...	11	6	5	4	3	4	4	3	3	2	6	10	31	30	61	...			
16	Perambur ...	34	45	43	24	21	26	27	23	25	27	28	27	178	174	352	...			
17	Chulai ...	41	30	27	19	34	21	13	18	19	19	22	23	142	144	286	...			
18	Purasawalkam ...	27	24	20	17	23	17	13	20	19	13	20	27	121	119	240	...			
19	Vepery ...	18	24	24	19	20	14	13	13	11	19	18	17	98	112	210	...			
20	Egmore ...	25	19	12	12	13	7	13	13	10	6	12	18	77	83	160	...			
21	Kilpauk ...	17	19	22	12	6	15	15	13	18	17	8	13	96	79	175	...			
22	Nungambakam ...	17	11	11	11	9	10	3	12	10	11	15	17	59	78	137	...			
23	Chintadripet ...	28	14	14	24	29	31	24	24	21	24	18	17	121	147	268	...			
24	Tiruvateswaranpet ...	22	20	20	14	15	18	19	13	16	21	18	42	128	110	238	...			
25	Chepauk ...	14	8	14	5	6	10	8	7	7	7	8	14	67	41	108	...			
26	Triplicane ...	7	4	4	8	8	10	8	7	4	5	7	10	43	39	82	...			
27	Amir Mahal ...	14	16	7	11	7	7	9	6	11	4	22	21	66	69	135	...			
28	Mirsahibpet ...	22	16	13	12	13	11	16	11	10	9	10	22	82	83	165	...			
29	Royapettah ...	23	18	16	19	22	14	14	14	10	7	21	14	86	106	192	...			
30	Mylapore ...	4	12	9	12	17	13	7	11	9	8	15	12	56	73	129	...			
	Total ...	509	465	414	350	362	342	340	344	307	337	418	483	2,350	2,321	4,671	8·8	9.2	9.0	9.0

Population for new Municipal divisions not being available in the year 1920, death rate for each division cannot be calculated for items 5 and 6.

Annual Form No. XIV—Deaths registered from "Tubercle" including Tubercle of the Lung by divisions during each month of the year 1920.

1	2	3												4			5			6
														Total			Ratio of deaths per 1,000 of Population.			
Divisions.	Districts.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.	Mean ratio per 1,000 during previous 5 years.

Divisions.	Districts.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.	Mean ratio per 1,000 during previous 5 years.
1	Royapuram	...	3	1	1	2	1	1	...	1	4	...	4	2	11	9	20				
2	Tondiarpet	...	10	6	9	5	1	6	1	3	5	5	3	8	43	19	62				
3	Washermanpet	...	5	2	6	6	1	2	...	...	4	2	...	5	22	21	33				
4	Korukupet	...	1	1	4	...	1	2	1	1	2	2	...	2	7	10	17				
5	Harbour	...	6	2	2	1	...	2	3	1	1	3	2	3	16	10	26				
6	Muthialpet	...	4	3	...	3	4	1	2	1	...	3	2	5	16	12	28				
7	Kachaleswaranpet	...	4	1	2	3	4	3	6	1	5	6	6	5	24	22	46				
8	Kothawal Bazaar	...	...	...	...	...	1	...	6	...	2	1	1	1	8	4	12				
9	Amman Koil	...	3	3	3	3	9	1	3	...	5	3	6	6	25	20	45				
10	Seven Wells	...	4	4	6	3	7	3	3	6	2	3	3	6	25	25	50				
11	Sowcarpet	...	1	1	...	...	...	1	4	1	1	3	1	1	4	10	14				
12	Peddunaickpet	...	6	4	4	7	4	2	3	6	5	3	4	1	21	28	49				
13	Trevelyan Basin	...	3	8	9	1	5	3	4	3	7	2	3	4	22	30	52				
14	Esplanade	...	3	...	3	1	...	2	2	...	1	...	4	2	14	4	18				
15	Park Town	...	2	3	3	5	...	3	3	5	4	4	6	9	20	27	47				
16	Perambur	...	5	1	...	...	2	...	...	1	1	3	2	4	11	8	19				
17	Chulai	...	6	3	1	2	2	1	2	3	1	...	1	2	16	8	24				
18	Purasawakam	...	2	...	1	1	...	1	1	1	1	4	1	1	6	8	14				
19	Vepery	...	1	...	5	2	1	1	...	2	1	2	3	1	8	11	19				
20	Egmore	...	3	2	3	6	2	6	4	2	...	4	3	3	21	17	38				
21	Kilpauk	...	2	7	3	3	2	1	3	1	4	3	3	3	20	15	35				
22	Nungambaukam	...	3	...	1	5	2	4	3	...	3	3	8	2	22	12	34				
23	Chintadripet	...	2	1	6	6	6	3	2	8	10	6	6	4	31	29	60				
24	Tiruvateswaranpet.		...	2	7	1	3	7	8	6	7	5	8	5	35	24	59				
25	Chepauk	...	4	3	2	3	4	1	5	1	3	3	...	5	16	18	34				
26	Triplicane	...	7	1	...	7	3	2	1	3	4	...	4	...	15	17	32				
27	Amir Mahal	...	3	4	...	4	2	4	5	3	...	2	4	2	17	16	33				
28	Mirsahibpet	...	5	1	1	2	1	1	3	1	5	6	4	3	19	14	33				
29	Rayapettah	...	4	3	2	3	1	1	1	2	...	5	...	4	14	12	26				
30	Mylapore	...	1	2	1	1	1	1	1	...	2	2	1	5	9	9	18				
	Total	...	103	69	85	86	70	66	80	63	90	88	93	104	538	459	997	2·0	1·8	1·9	2·1

Population for new Municipal Divisions not being available in the year 1920, death rate for each division cannot be calculated for items 5 and 6.

Annual Form No XV—Deaths registered from "Respiratory Diseases" excluding Tubercle of the Lung by divisions during each month of the year 1920.

1	2	3												4			5			6
Divisions.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of Population.			Mean ratio per 1,000 during previous five yers
														Males.	Females.	Total,	Males.	Females.	Total.	
1	Royapuram ...	8	12	9	9	12	7	8	5	4	2	8	15	60	39	99				
2	Tondiarpet ...	7	13	7	10	16	6	17	7	10	6	11	13	65	58	123				
3	Washermanpet ...	13	20	17	18	13	9	18	12	9	19	14	19	93	88	181				
4	Korukupet ...	7	7	9	8	11	8	5	11	6	10	11	12	52	53	105				
5	Harbour ...	10	8	7	5	5	8	7	12	10	5	6	11	50	44	94				
6	Muthialpet ...	11	7	9	7	10	9	7	6	8	5	10	12	48	53	101				
7	Kachaleswaranpet ...	12	12	14	9	12	8	13	7	10	7	11	14	62	67	129				
8	Kothawal Bazaar ...	11	3	9	3	5	2	4	3	5	3	3	7	31	27	58				
9	Ammen Koil ...	11	10	11	7	...	4	3	2	5	7	7	20	45	42	87				
10	Seven Wells ...	15	5	12	15	4	4	5	4	3	11	8	9	48	47	95				
11	Sowcarpet ...	7	9	9	2	4	3	3	5	1	5	9	6	28	35	63				
12	Peddunaickpet ...	6	12	26	8	12	11	8	11	10	15	25	23	90	77	167				
13	Trevelyan Basin ...	19	5	12	18	11	13	10	10	13	12	10	16	67	82	149				
14	Esplanade ...	4	1	7	2	2	3	5	8	...	5	6	4	29	18	47				
15	Park Town ...	17	13	11	14	11	10	16	19	13	15	21	23	91	92	183				
16	Perambur ...	17	21	16	12	7	13	9	9	6	7	18	14	77	72	149				
17	Chulai ...	26	15	29	15	13	10	12	6	12	11	17	24	87	103	190				
18	Purasawakam ...	13	12	15	7	9	15	10	8	9	10	17	16	84	57	141				
19	Vepery ...	27	22	20	11	20	12	14	10	6	9	16	15	85	97	182				
20	Egmore ...	25	11	12	20	5	19	10	10	9	11	18	16	80	86	166				
21	Kilpauk ...	17	10	8	10	6	8	9	7	8	9	14	18	69	55	124				
22	Nungambakam ...	7	4	8	4	7	3	3	7	4	5	7	8	42	25	67				
23	Chintadripet ...	7	4	26	21	11	20	4	8	17	11	10	9	65	83	148				
24	Tiruvateswaranpet ...	6	5	11	9	14	16	7	14	10	10	13	18	67	66	133				
25	Chepauk ...	5	10	6	4	3	1	2	5	5	1	8	4	28	26	54				
26	Triplicane ...	5	7	4	6	2	2	2	5	8	9	6	7	29	34	63				
27	Amir Mahal ...	7	11	10	15	8	9	5	7	10	6	13	12	54	59	113				
28	Mirsahibpet ...	5	7	9	5	10	6	2	6	3	3	15	4	40	35	75				
29	Rayapettah ...	9	9	13	7	5	8	5	2	...	8	6	3	39	36	75				
30	Mylapore ...	8	5	6	3	6	3	6	5	4	6	11	7	37	33	7C				
	Total ..	342	290	362	284	254	250	229	231	218	243	349	379	1,742	1,689	3,431	6·5	6·7	6·6	6·9

Population for new municipal divisions not being available in the year 1920, death rate for each division cannot be calculated for items 5 and 6.

Annual Form No. XVI—Deaths registered from 'Injuries' by divisions during each month of the year 1920.

1	2	3												4			5			6
														Total.			Ratio of deaths per 1,000 of Population.			
Divisions.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.	Mean ratio per 1,000 during previous five years.
1	Royapuram ...	2	2	...	1	...	2	...	...	1	1	...	2	8	3	11				
2	Tondiarpet ...	...	1	4	1	5	3	...	2	2	3	3	3	21	6	27				
3	Washermanpet ...	...	...	2	...	...	...	1	2	...	...	1	...	2	4	6				
4	Korukupet ...	1	...	...	...	1	...	...	...	...	1	...	...	1	2	3				
5	Harbour ...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1				
6	Muthialpet ...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	2				
7	Kachaleswaranpet ...	...	...	...	...	...	...	...	...	...	...	...	2	1	1	2				
8	Kothawal Bazaar ...	...	...	...	2	...	...	...	...	...	...	...	...	2	...	2				
9	Ammen Koil ...	3	1	1	1	1	...	1	...	...	3	2	...	9	4	13				
10	Seven Wells ...	...	2	1	...	...	...	2	...	1	...	...	2	4	4	8				
11	Sowcarpet ...	...	...	1	...	...	1	...	...	...	...	...	...	2	...	2				
12	Peddunaickpet ...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1				
13	Trevelyan Basin ...	1	...	...	2	1	...	...	...	1	...	2	1	5	3	8				
14	Esplanade ...	4	...	...	...	1	1	...	4	..	3	4	3	15	5	20				
15	Park Town ...	1	...	...	1	...	...	...	...	...	1	1	1	3	2	5				
16	Perambur ...	9	9	...	3	5	5	3	3	4	5	3	3	26	26	52				
17	Chulai ...	1	2	...	1	...	...	1	...	...	...	...	1	5	1	6				
18	Purasawakam ...	6	5	...	5	5	...	5	3	3	4	4	3	22	21	43				
19	Vepery ...	1	1	...	1	1	...	...	...	...	...	...	...	3	1	4				
20	Egmore ...	...	...	1	...	...	...	...	1	...	1	...	...	[illegible]	...	3				
21	Kilpauk ...	...	...	...	...	...	...	2	...	...	1	2	...	4	1	5				
22	Nungambakam ...	...	1	1	...	2	...	3	...	1	2	...	...	4	6	10				
23	Chintadripet ...	...	...	...	3	...	...	...	...	...	1	...	...	2	2	4				
24	Tiruvateswaranpet ...	1	...	1	1	3	4	...	...	1	...	2	...	9	4	13				
25	Chepauk ...	2	...	...	1	3	...	1	1	...	...	1	...	5	3	8				
26	Triplicane ...	1	...	2	...	5	2	1	...	...	...	...	2	6	7	13				
27	Amir Mahal ...	2	1	...	...	...	...	...	...	1	...	...	1	2	3	5				
28	Mirsahibpet ...	...	...	...	1	...	...	1	...	...	...	1	...	...	3	3				
29	Rayapettah ...	...	1	...	1	1	...	2	...	...	...	2	4	8	3	11				
30	Mylapore ...	...	1	...	2	...	...	...	...	2	...	...	...	4	1	5				
	Total ...	35	27	14	27	33	18	24	16	17	26	28	31	180	116	296	0·7	0·5	0·6	0·4

Population for new Municipal Divisions not being available in the year 1920, death-rate for each division cannot be calculated for items 5 and 6

Annual Form No. XVII—Deaths registered from "Other Causes" by divisions during each month of the year 1920.

1	2	3												4			5			6
Divisions.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.			Ratio of Deaths per 1000 of Population.			Mean ratio per 1,000 during previous 5 years.
														Males.	Females.	Total.	Males.	Females.	Total.	
1	Royapuram ...	55	31	33	28	39	27	31	33	25	27	41	40	203	207	410				
2	Tondiarpet ...	50	49	43	43	33	58	60	44	41	63	78	86	384	264	648				
3	Washermanpet ...	39	38	34	24	26	16	24	24	35	30	52	62	203	201	404				
4	Korukupet ...	34	18	19	16	11	14	18	16	22	18	31	33	132	118	250				
5	Harbour ...	10	13	11	13	9	13	5	14	10	13	15	11	72	65	137				
6	Muthialpet ...	9	10	17	8	13	14	8	13	18	18	23	18	84	85	169				
7	Kachaleswaranpet ...	20	11	19	16	21	6	12	15	22	18	27	25	116	96	212				
8	Kothawal Bazaar ...	9	6	6	5	7	7	5	5	3	8	7	4	39	33	72				
9	Ammen Koil ...	43	40	28	28	31	24	29	24	28	33	50	62	209	211	420				
10	Seven Wells ...	59	34	38	27	33	34	32	37	23	29	37	38	215	206	421				
11	Sowcarpet ...	14	9	14	10	10	12	9	3	12	9	13	10	74	51	125				
12	Peddunaikpet ...	39	29	34	27	25	26	30	29	27	33	28	47	179	195	374				
13	Trevelyan Basin ...	30	30	31	26	35	19	20	24	30	31	29	40	168	177	345				
14	Esplanade ...	22	15	22	18	13	12	15	11	12	13	18	15	126	60	186				
15	Park Town ...	40	26	25	25	24	17	25	30	17	24	23	31	169	138	307				
16	Perambur ...	36	33	43	19	25	23	21	19	31	30	35	48	183	180	363				
17	Chulai ...	39	34	35	28	26	20	33	37	25	39	34	49	189	210	399				
18	Purasawalkam ...	27	34	32	25	17	23	20	24	26	23	23	33	149	158	307				
19	Vepery ...	35	34	23	15	30	20	16	28	27	19	34	39	161	159	320				
20	Egmore ...	37	34	35	37	28	28	29	30	33	28	41	53	196	217	413				
21	Kilpauk ...	31	25	25	18	20	23	19	31	19	25	19	25	142	138	280				
22	Nungambakkam ...	31	23	25	15	21	23	21	25	14	19	24	32	133	140	273				
23	Chintadripet ...	55	27	25	38	43	24	30	30	27	46	43	53	251	190	441				
24	Tiruvateswaranpet ...	47	36	48	32	37	32	19	34	39	38	45	49	227	229	456				
25	Chepauk ...	33	19	24	23	10	27	8	21	23	15	28	36	133	134	267				
26	Triplicane ...	22	25	19	11	26	16	18	12	16	19	32	40	129	127	256				
27	Amir Mahal ...	27	30	30	20	26	23	21	20	31	28	33	24	147	166	313				
28	Mirsahibpet ...	36	27	22	18	17	21	22	23	25	38	36	32	172	145	317				
29	Rayapettah ...	24	26	27	15	25	19	20	19	32	25	42	39	158	155	313				
30	Mylapore ...	22	24	23	14	26	12	16	17	9	21	28	33	128	117	245				
	Total ...	975	790	810	642	707	633	636	692	702	780	969	1,107	4,871	4,572	9,443	18·3	18·1	18·2	19·1

Population for new Municipal Divisions not being available in the year 1920, death rate for each Division cannot be calculated for items 5 and 6.

Annual Form No. XVIII :—Comparing the Deaths from some of the principal diseases during the year with the deaths during the preceding five years.

Years.	Cholera.		Small-pox.		Measles.		Plague.		Malaria.		Enteric Fever.		Other Fevers.		Dysentery and Diarrhœa.		Tubercle excluding Tubercle of Lung.		Respiratory System. Phthisis.		Respiratory System. Other Diseases of the Respiratory System.		Injuries.		All other causes.		Total Deaths.	
	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000.	Deaths.	Ratio per 1,000	Deaths.	Ratio per 1,000.
1915 ...	35	0·07	92	0·2	81	0·2	...	...	1686	3·3	75	0·1	569	1·1	4,208	8·1	48	0·09	711	1·4	2,303	4·4	178	0·3	8,702	16·8	18,688	36·0
1916 ...	30	0·06	476	0·9	282	0·5	11	0·02	763	1·5	49	0·09	479	0·9	3,664	7·1	77	0·1	799	1·5	2,851	5·5	145	0·3	8,246	15·9	17,872	34·5
1917 ...	78	0·2	195	0·4	79	0·2	6	0 01	859	1·7	47	0·09	575	1 1	4,131	7·9	91	0·2	976	1·9	3,293	6·4	203	0·4	9,384	18·1	19,917	38·4
1918 ...	503	1·0	272	0·5	104	0·2	22	0·04	881	1·7	45	0·09	4792	9·2	5,533	10·7	57	0·1	1,431	2·8	5,518	10·6	177	0 3	11,927	23·0	31,262	60·3
1919 ...	642	1·2	611	1·2	108	0·2	14	0·03	736	1·2	52	0·1	2522	4.9	5,835	11·3	131	0·3	1,178	2·3	3,839	7·4	209	0·4	11,310	21·8	27,187	52·4
Mean of the last five years.	258	0.5	329	0·6	131	0·3	11	0·02	985	1·9	54	0·1	1787	3·4	4,674	9·0	81	0.2	1,019	2·0	3,561	6·9	182	0·4	9,914	19·1	22,985	44·3
1920 ...	22	0·04	109	0·2	41	0·08	8	0·02	560	1·1	66	0·1	1780	3·4	4,6[illegible]1	9·0	77	0·1	920	1·8	3,431	6·6	296	0·6	9,443	18·2	21,418	41·3

Annual Form No. XIX showing a complete classification of diseases arranged in the order adopted in the Nomenclature of Diseases.

	No. in the Nomenclature of Diseases.	Causes of Death.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Infective Diseases.	4	Beri-Beri	...	...	...	...	1	...	...	...	...	2	...	...	3
	6	Chicken-pox	1	1	2	...	...	...	1	..	1	...	...	...	6
	7	Cholera	3	2	7	2	1	1	...	1	...	3	...	2	22
	10	Diphtheria	1	...	...	...	...	...	...	...	...	...	1	...	2
	11	Dysentery	301	248	253	200	170	147	143	160	135	166	213	244	2,380
	13	Enteric Fever	1	7	8	11	6	3	4	1	6	9	5	5	66
	14	Enteritis	208	217	161	150	192	195	197	184	172	171	205	239	2,291
	15	Erysipelas	...	1	...	...	...	1	...	2	...	1	2	6	13
	21	Influenza	20	33	20	17	4	14	8	11	24	29	23	47	250
	22	Kala-Azar	3	3	1	2	1	...	2	...	...	1	3	6	22
	23	Leprosy	7	9	8	9	9	8	12	9	6	9	13	15	114
	25	Malarial Fever	66	56	56	44	41	32	29	36	21	30	37	65	513
		„ with Enlargement of Spleen ...	3	9	2	3	1	1	...	5	1	2	...	4	31

Infective Diseases.—*Contd.*		Malarial Fever with Congestion of Brain ...	...	...	1	...	1	...	...	1	...	...	1	...	4
		,, (*d*) Cachexia	1	...	...	1	2	...	1	3	1	1	1	1	12
	26	Measles	5	6	10	7	4	1	2	...	1	...	3	2	41
	28	Mumps	...	...	...	...	...	...	...	...	...	...	...	1	1
	31	Plague	...	2	...	...	...	...	...	...	...	...	...	6	8
	32	Pneumonia	127	75	115	91	93	97	65	55	82	72	99	103	1,074
	34	Pyrexia of uncertain origin	187	116	130	132	101	150	108	104	124	118	141	178	1,589
	35	Hydrophobia	...	...	1	...	1	...	...	2	...	...	...	...	4
	37	Rheumatism	2	1	2	2	1	...	1	...	1	3	2	5	20
	39	Septicaemia	3	5	3	1	4	4	4	6	1	5	2	6	44
		,, Puerperal	11	10	9	17	14	13	9	7	11	13	9	15	138
		,, Septic Fever	...	...	...	1	...	...	...	...	2	1	3	2	9
		,, Ankylosis	...	...	...	1	1	1	...	...	...	...	...	...	3
	41	Small-pox	10	9	17	21	15	4	5	4	9	6	7	2	109
	42	Syphilis	4	2	5	2	4	3	1	8	4	7	6	11	57
	43	Tetanus	4	5	5	4	8	4	5	3	3	4	7	8	60
	44	Tubercle excluding Tubercle of the lung ...	5	12	6	8	6	6	6	3	2	8	5	10	77
	47	Whooping-Cough	16	11	27	17	13	15	8	9	9	10	10	15	160

Annual Form No. XIX. showing a complete classification of diseases arranged in the order adopted in the Nomenclature of Diseases:—(*Contd*).

	No. in the Nomenclature of Diseases.	Causes of Death.	January.	February.	March	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
General Diseases.	61	Anaemia	17	13	14	17	13	15	12	13	3	15	14	15	161
	63	" Pernicious	1	...	4	1	...	1	...	2	...	1	...	2	12
		" and Dropsy	5	13	12	14	24	26	22	24	20	26	30	27	243
	66	Diabetes	2	1	4	1	1	1	3	4	2	2	1	...	22
		Diabetic Corbuncle	...	...	...	...	1	...	...	...	...	...	...	...	1
		" Coma	...	...	1	...	...	...	...	...	...	1	...	...	2
		" Gangrene	...	...	...	...	...	1	...	...	...	...	1	1	3
	76	Rickets	2	3	2	...	4	1	1	2	7	3	4	3	32
Certain morbid conditions incident to various parts.	80	Tumour in the Abdomen	...	2	1	1	1	1	1	2	...	3	1	1	14
		Sarcoma	...	1	...	1	...	...	...	...	1	2	1	2	8
		Cancer	1	2	1	1	4	5	2	1	2	3	4	2	28
		Ulcer	1	...	...	1	...	...	1	1	...	1	2	1	8
		VEGETABLE POISON.													
		37 Opium	...	1	...	...	...	...	...	...	...	...	1	...	2
		ANIMAL POISON.													
		1. Venoms.—(*a*) Snake-bite...	...	...	...	1	1	...	1	...	...	1	...	...	4

Diseases of the Nervous System.		DISEASES OF THE SPINAL CORD AND MEMBRANE.													
		MEMBRANES.													
	88	Meningitis	2	5	1	1	1	2	...	1	1	2	1	3	20
		SPINAL CORD.													
	90	Myelitis	...	...	...	...	1	...	...	...	...	...	...	...	1
		DISEASES OF THE BRAIN AND ITS MEMBRANES. BRAIN.													
	101	Cerebral Haemorrhage	4	1	5	4	4	2	2	4	2	4	1	5	38
	109	Apoplexy	4	1	6	...	2	6	3	2	2	2	4	2	34
	110	Paralysis	15	11	14	12	10	10	9	10	9	12	10	13	135
		,, (a) Paraplegia	3	2	1	1	3	...	3	...	...	1	2	4	20
		,, (b) Hemiplegia	14	13	5	11	9	10	10	10	15	15	17	21	150
	123	Eclampsia (Convulsions)	168	146	127	122	146	122	117	117	107	142	185	169	1,668
		,, Puerperal ... .. -	9	3	5	9	8	5	4	9	9	6	2	8	77
	124	Epilepsy	5	2	...	3	...	1	4	2	2	1	2	1	23
	131	Neuralgia	...	...	...	...	...	...	...	...	...	...	1	...	1
	133	Hysteria	...	1	...	2	...	...	1	...	...	1	3	...	8
	143	Neurasthenia	...	...	1	...	...	...	...	...	...	...	...	...	1
		II. DISORDERS OF FUNCTION.													
	145	Mania	3	...	1	...	...	...	...	...	...	...	1	1	6

Annual Form No. XIV showing a complete classification of Diseases arranged in the order adopted in the Nomenclature of Diseases:—(*Contd*).

	No. in the Nomenclature of Diseases.	Causes of Death.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Diseases of the Circulatory System.		DISEASES OF THE HEART.													
	286	Pericarditas	...	...	...	...	1	...	...	...	...	...	...	...	1
		DISEASES OF THE ENDOCARDITUM.													
	292	Endocarditis	...	...	1	...	...	...	...	...	1	...	...	1	3
	293	Valvular Disease	9	4	12	6	13	2	10	10	14	4	6	13	103
		Cardiac Failure	4	13	5	8	7	8	9	15	7	12	13	14	115
		Cardiac Dropsy...	6	4	3	1	8	7	2	2	1	1	...	2	37
		Diseases of the Heart (Not specified)	19	11	14	9	15	14	22	13	21	11	12	11	172
		Diseases of the Myocardium.													
	294	Myocarditis	1	...	1	...	1	...	...	1	...	...	1	...	5
	298	Dilatation of the Heart	...	2	...	...	...	...	1	2	...	...	2	1	8
	304	Syncope	...	...	...	1	...	...	1	...	...	...	...	...	2

	No.	Disease													Total
Diseases of the Circulatory System—contd.		DISEASES OF THE BLOOD VESSELS.													
	316	Aneurysm of Aorta	...	1	...	...	...	...	...	...	...	...	1	...	2
	322	(1) Thrombosis of Arteries	...	...	...	...	...	...	...	1	...	...	1	1	3
		Diseases of the Veins.													
	325	Phleymasia dolens	...	...	...	...	...	...	...	1	...	...	...	...	1
Diseases of the Respiratory System.		DISEASES OF THE RESPIRATORY SYSTEM NOT STRICTLY LOCAL.													
	338	Asthma	22	10	13	8	6	12	9	12	4	8	12	14	130
		Diseases of the Larynx.													
	339	Laryngititis	1	...	...	...	...	...	...	...	...	...	...	...	1
		DISEAESS OF THE TRACHEA AND BRONCHI.													
	404	Bronchitis (Acute)	20	7	13	12	11	4	5	9	5	18	27	17	148
		„ Chronic	19	11	11	9	10	5	12	9	7	13	12	18	136
		DISEASES OF THE LUNG.													
	410	Congestion of Lung	3	...	...	...	...	...	...	...	...	...	...	2	5
	411	Flaemoptysis	2	...	...	...	...	...	...	...	...	...	...	3	5
	413	Broncho-Pneumonia	173	152	179	144	115	114	119	131	103	116	177	186	1,709
	419	Phthisis	98	57	79	78	64	60	74	60	88	80	88	94	910
	422	Atelectasis	15	6	3	3	6	3	9	5	8	6	12	16	92
	423	Collapse of the Lung	...	1	...	...	...	...	...	...	...	...	...	...	1
		DISEASES OF THE PLEURA.													
	425	Pleurisy	7	1	1	...	...	...	2	1	...	...	...	5	17

Annual Form No. XIX showing a complete classification of Diseases arranged in the order adopted in the Nomenclature of Diseases.—(*Contd*).

	No. in the Nomenclature of Diseases.	Causes of Death.	January.	February.	March	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Diseases of the Digestive System.		DISEASES OF THE MOUTH.													
	436	Stomatitis	...	...	...	...	...	...	...	...	...	...	...	1	1
	438	Cancrumoris	...	...	1	2	...	...	...	2	...	1	3	...	9
		DISEASES OF THE TEETH, ALVEOLI AND GUMS													
	440	Disorders of Dention Diarrhœa	2	4	1	...	3	4	3	4	3	5	3	1	33
		Diseases of the Palate and Fances													
		Diseases of the Stomach.													
	489	Gastritis Acute	4	1	5	3	2	4	2	2	3	5	10	5	46
		,, Chronic	...	...	...	...	...	...	1	...	...	...	...	...	1
	491	Gangrene	2	1	1	1	...	...	...	...	...	1	...	2	8
	499	Dyspepsia	2	12	13	3	10	5	3	6	6	5	5	11	81
		DISEASES OF THE INTESTINES.													
	515	Inflamation :—													
		,, (2) Appendicitis	2	1	...	1	...	1	2	...	...	1	...	2	10
		,, Gastro-Enteritis	1	1	1	...	2	2	1	1	...	...	1	3	13

Diseases of the Digestive System—contd.	526	Sprue	...	...	1	...	...	1	...	...	...	2	...	...	4
	528	Hernia	1	2	4	2	1	1	3	3	3	2	...	3	25
		„ Strangulated.	3	1	3	4	3	3	2	2	1	1	2	3	28
	530	Intussusception	...	...	2	1	...	...	...	...	...	...	...	...	3
	536	Obstruction of Bowels	7	4	2		6	3	8	6	7	7	7	12	70
	539	Intestinal catarrh	3	1	...	...	...	...	1	2	...	...	...	1	8
	544	Colic	2	1	1	...	1	1	2	1	3	...	2	2	16
		Diseases of the Rectum and Anus.													
	549	Fistula of Anus	...	...	...	...	1	...	...	...	...	...	2	...	3
	556	Piles	...	...	...	...	...	...	...	1	...	...	1	1	3
		Diseases of the Liver.													
	568	Hepatitis	4	1	...	...	...	...	...	1	2	...	2	1	11
		„ (b) Cirrhosis of Liver	11	4	11	9	4	2	4	8	8	6	4	6	77
	569	Enlargement of Liver	...	2	2	4	...	1	..	2	...	1	3	3	18
	570	Acute Yellow Atrophy	...	...	...	...	...	...	...	1	...	...	1	1	3
	575	Jaundice	5	3	5	2	7	2	3	6	2	1	2	3	41
		Diseases of the Peritoneum.													
	588	Peritonitis	3	4	3	4	3	2	2	7	2	4	6	4	44
	590	Ascites	19	23	25	24	23	20	12	15	16	18	23	22	240

Annual Form No. XIX.—showing a complete classification of diseases arranged in the order adopted in the Nomenclature of Diseases.—(*Contd*).

	No. in the Nomenclature of Diseases.	Causes of Death.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Diseases of the Lymphatic System.		Diseases of the Spleen.													
	592	Enlargement of the Spleen	1	3	...	...	1	2	...	...	2	3	...	5	17
		Diseases of the Lymphatic Glands.													
	605	Bubo	...	...	...	...	...	1	2	...	...	...	...	...	3
	615	Filariasis	1	1	...	1	...	...	...	...	1	...	1	2	7
		Diseases of the Lymphatic Vessels.													
	618	Elephantiasis of the Scrotum	...	...	...	...	...	...	1	...	...	...	1	1	3
		Elephantiasis of the Leg	2	1	...	...	1	...	...	..	...	...	...	...	4
Diseases of the Urinary System.		Diseases of the Kidney.													
	651	Nephritis Acute...	9	11	10	3	8	3	4	8	2	6	8	11	83
		Renal Dropsy	3	7	5	3	3	1	5	6	4	2	3	9	51
	652	Bright's Diseases	6	3	9	5	9	5	3	4	5	6	5	7	67

Diseases of the Urinary System.--contd.	654	Abcess	1	...	...	...	1	...	...	...	...	...	...	...	2
		DISEASES OF URETHRA.													
	674	Urinary Fistula	...	...	...	...	...	...	...	...	...	...	1	1	2
		Diseases of the Bladder.													
	676	Cystitis	...	1	...	...	...	...	...	1	...	...	1	...	3
	685	Rupture (Bladder)	...	...	...	...	...	...	...	...	...	...	1	...	1
	687	Stone in the Bladder	...	...	...	...	1	...	...	...	...	1	...	...	2
		URINARY DISORDERS.													
	692	Suppression of Urine	...	...	...	...	...	...	...	1	...	...	1	1	3
	697	Albuminuria	...	2	...	...	...	1	1	3	2	1	3	2	15
		Uraemia Coma	...	...	...	...	1	...	1	1	...	1	...	...	4
Diseases of the Generative System.		Diseases of the Male Organs of Generation. Diseases of the Urethra.													
	712	Stricture of Urethra	...	1	...	...	...	...	...	...	1	...	...	2	2
	715	Extravasation of Urine	1	...	...	...	1	...	...	...	2	1	1	...	6

Annual Form No. XIX showing a complete classification of Diseases arranged in the order adopted in the Nomenclature of Diseases:—(*Contd*).

	No. in the Nomenclature of Diseases.	Causes of Death.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Diseases of the Generative System.—*contd*		Diseases of the Prostate.													
	720	Hypertrophy	...	...	...	...	...	...	...	...	...	1	...	...	1
		Diseases of the Penis													
	732	Ulcer of Penis	...	..	...	...	...	...	...	...	...	..	1	1	2
	741	Cellulitis Scrotum	...	1	1	...	1	1	...	1	1		2	3	11
	742	Sloughing Sricotum	...	...	...	...	...	...	...	...	...	...	...	...	...
		Disease of the Tunica Vaginalis.													
	754	Hydrocele	...	...	1	...	...	...	...	...	...	...	...	1	2
		Diseases of the Testicle.													
	757	Inflamation—(1) Orchitis	...	...	...	...	...	...	...	...	...	...	1	...	1

Diseases of the Generative System—contd.		**Diseases of the Female Organs of Generation.**													
		Diseases of the Uterine Sigaments, etc.													
	783	Inflamation—(b) Pelvic Cellulitis	...	...	1	...	...	...	...	...	...	...	1	...	2
		Diseases of the Uterus including the Cervix.													
	785	Metritis	...	...	...	...	...	...	...	1	...	...	...	...	2
	787	Ulcer Uterus	...	...	2	...	...	...	...	...	...	...	...	...	2
	797	Rupture of Uterus	...	...	2	1	4	3	2	...	1	...	2	...	15
Affections connected with Pregnancy.		Affections connected with Pregnancy.													
	834	Abortion	1	...	...	...	...	1	...	...	...	2	2	2	8

Annual Form No XIX showing a complete classification of Diseases arranged in the order adopted in the Nomenclature of Diseases:—(*Contd*).

	No. in the Nomenclature of Diseases.	Causes of Deaths.	January.	February	March	April	May	June	July	August	September	October	November	December	Total.
Affections connected with Parturition.		Affections connected with Parturition													
	842	Haemorrhage	...	...	...	3	...	2	1	...	...	2	...	3	11
		(a) Unavoidable from Placenta Parevia ...	...	1	...	...	...	...	[illegible]	1	...	...	...	[illegible]	4
	850	Asphyxia of child	12	10	3	1	...	...	...	...	...	...	...	...	26
	852	Premature Birth	105	77	79	70	73	62	61	75	107	100	105	118	1032
		Difficult Labour...	...	...	1	1	...	...	...	1		...	...	...	3
		Affections connected on Parturition.													
	853	Post-partum Hæmorrhage	2	...	...	...	...	3	1	1	...	..	...	..	7

Affections connected with parturition.	855	Puerperal causes	...	...	...	...	...	...	...	...	...	...	...	...	...
		„ Sapraemia	...	2	...	1	...	2	...	1	...	...	...	1	7
		„ Tetanus	...	1	...	1	...	1	2	1	3	2	1	2	14
		„ Pyaemia	3	1	3	1	...	1	1	1	...	...	2	2	15
	861	Pelvic Abscess	...	...	...	...	...	...	...	1	2	...	...	...	3
	870	Sudden death after delivery	...	2	...	1	...	...	3	2	1	1	...	2	12
Diseases of the Organs of Locomotion.		Diseases of the Bones exclusive of the Spine, Inflamation.													
	885	(b) Periostitis	3	...	...	...	...	...	...	...	...	...	...	...	3
Diseases of the Connective Tissue.		Diseases of the Connective Tissue.													
	952	Cellulitis	...	1	...	...	...	...	...	...	...	1	...	1	3
	953	Abscess	6	3	7	5	5	4	6	4	4	4	3	5	56
Diseases of the Skin.		Diseases of the Skin.													
	962	Eczema	3	1	...	1	1	1	1	1	2	1	...	1	13
	966	Carbuncle	1	1	1	1	2	4	2	4	4	2	1	1	24

Annual Form No. XIX showing a complete classification of Diseases arranged in the order adopted in the Nomenclature of Diseases.—(*Contd*).

	No. in the Nomenclature of Diseases.	Causes of Death.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
General Injuries.		B Animal Parasitis.													
	1001	Scabees	1	1	1	...	...	1	...	...	2	...	...	...	6
		General Injuries													
	1025	Effects of Heat (a) Burn and scalds	6	4	4	2	3	1	3	2	...	3	...	3	31
	1030	Suffocation :— ...	7	1	2	2	2	2	3	1	1	2	2	3	28
		„ by Drowning, Accident	8	5	1	5	5	6	3	2	1	4	7	6	53
	1031	Starvation	...	...	...	1	1	...	...	...	...	1	1	1	5
	1033	Shock	2	1	4	1	3	3	2	...	3	...	3	3	25
Local Injuries.		Local Injuries.													
	1092	Fracture of the Skull	1	2	1	3	1	2	2	...	1	2	6	...	21
	1098	Compression of Brain	...	...	...	...	..	...	...	1	...	...	...	...	1
	1101	Gun-shot wound	...	...	...	1	...	...	...	...	...	...	...	...	1
		Injuries of the Chest.													
	1145	Fracture of Ribs ... — ...	...	1	1	...	...	...	...	...	...	1	...	...	3
	1156	Multiple injuries	2	5	4	5	2	2	1	...	...	...	...	5	26

		Injuries of the lower extremities														
	1227	Fracture of Femur					1	...	...	1	...	...	...	1		8
		Ill-defined and non-specified causes.														
		Debility	120	104	96	77	102	86	88	98	94	110	131	134		1240
		Old age	230	203	217	146	133	126	137	129	151	158	253	280		2163
		Natural causes	2	...	...	1	1	1	3	1	...	1	...	1		11

TABLE A.

Comparative Statement of deaths from some of the principal diseases during the past 12 years.

Years.	Births.		Deaths.		Small-pox.		Malaria.		Other Fevers.		Other Infectious Diseases.		Plague.		Diarrhoea and Dysentery		Respiratory Diseases.		Infantile Mortality under 1 year.		Deaths from children between 1 to 5 years.		Still-Births.
	No. of Births registered exclusive Still-births.	Birth-rate.	No. of Deaths registered exclusive Still-births.	Death-rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.
1909	18,981	37.2	19,354	37·9	68	0·1	2,514	4·9	1,900	3·7	484	1·0	3	0·005	3,701	7·2	1,648	3·2	5, 600	295·0	2,60 5	57·5	743
1910	19,340	37 9	20,312	39·8	116	0 2	2,376	4·6	2,742	5·4	1,066	2·1	5	0·009	3,635	7·1	2,173	4·3	5,687	294·1	3,059	67·5	673
1911	19,735	38·3	21,771	42·0	480	0·9	2,884	5·6	1,163	2·2	1,482	2·9	3	0·005	4,854	9·4	3,011	5·8	6,027	305·4	3,233	73·7	665
1912	20,099	38·8	20,132	38·8	106	0·2	2,934	5 7	999	1·9	927	1·8	1	0·002	4,897	9·4	2,671	5·2	5,628	280·4	2,951	67·2	674
1913	19,470	37·5	20,675	39·9	34	0·06	2,788	5·4	1,043	2·0	1,232	2·4	3	0·005	5,193	10·0	2,700	5·2	5,713	293·4	3,296	75·1	642
1914	18,241	35·5	24,174	46·6	66	0 1	2,658	5·1	786	1·5	2,306	4·4	2	0·004	5,508	10·6	3,762	7·3	5.635	308·9	3,740	85·2	606
1915	18,331	35·3	18,688	36·0	92	0·2	1,686	3·3	644	1·2	555	1·1	...	...	4,208	8·1	3,062	5·9	5,244	286·1	2,748	62·6	650
1916	21,675	41·8	17,872	34·5	476	0·9	763	1·5	528	1·0	443	0·9	11	0·02	3,664	7·1	3,727	7·2	5,746	265·1	2,742	62·5	975
1917	23,296	44·9	19,917	38·4	195	0·4	859	1·7	575	1·1	654	1·3	6	0·01	4,131	7·9	4,360	8·4	6,460	277·3	2,945	67·1	1,077
1918	19,897	38·4	31,262	60·3	272	0·5	881	1·7	4,837	9·3	542	1·0	22	0·04	5,533	10·7	7,006	13·5	7,068	355·2	4,914	112·0	834
1919	18,936	36·5	27,187	52·4	611	1·2	736	1 2	2,574	5·0	1,[illegible]88	2·5	14	0·03	5,835	11·3	5,148	9·9	6,230	329·0	4,595	104·7	837
1920	21,396	41·3	2,1418	41 3	109	0·2	560	1·1	1,780	3·4	1995	3·8	8	0·02	4,671	9·0	4428	8·5	5,976	279·3	3,654	83·3	1,172

TABLE B.

Years.	1st Quarter. January to March.	2nd Quarter April to June.	3rd Quarter. July to September.	4th Quarter. October to December.	Total.
	Inches.	Inches.	Inches.	Inches.	Inches.
1915 ...	10·15	2·19	20·43	23·84	56·61
1916 ...	0·04	4·27	8·78	33·38	46·47
1917 ...	0·44	6·15	15·90	28·57	51·06
1918 ...	10·25	7·60	6·96	50·19	75·00
1919 ...	2·33	2·52	16·06	29·87	50·78
1920 ...	5·66	1·92	4·75	51·56	63·89

TABLE C.

Table of Births, Deaths and Infantile Death-rates for the different races in the City for 1919 and 1920.

Race or Caste.	Population (Census 1911)	1919. Total No. of Births.	1919. Birth-rates.	1919. Total No. of Deaths.	1919. Death-rates.	1919. Infantile Deaths.	1919. Infantile Death-rates.	1920. Total No. of Birth.	1920. Birth-rates.	1920. Total No. of Deaths.	1920. Death-rates.	1920. Infantile Deaths.	1920. Infantile Death-rates.
Europeans ...	4,187	96	22·9	73	17·4	15	156·2	86	20·5	51	12.2	10	1
Anglo-Indians ...	10,332	376	36·4	365	35·3	84	223·4	385	37·3	312	30.2	57	148·1
Indian-Christians ...	27,293	844	30·9	1,073	39·3	265	314·0	985	36·1	963	35.2	140	142·1
Hindus ...	4,15,910	15,371	37·0	22,414	53·9	5062	329·3	17,420	41·9	17,412	41·9	5,409	310·5
Mahomedans ...	59,169	2,239	37·8	3,253	55 0	804	159·1	2,518	42·6	2,669	45.1	360	143·0
Others ...	1,769	10	5 7	9	5·1	...	...	2	1.1	11	6·2	...	...
Total ...	5,18,660	18,936	36·5	27,187	52·4	6230	329·0	21,396	41·3	21,418	41.3	5,976	279·3

TABLE D.

Table of Birth and Death rates of Principal Sub-divisions of the Hindu Community for 1919 and 1920.

Principal Sub-Divisions of the Hindu Community.	Population.	1919. Total Births.	1919. Birth rates.	1919. Total Deaths.	1919. Death rates.	1920. Total Births.	1920. Birth rates.	1920. Total Deaths.	1920. Death rates.
Brahmins ...	32,727	1,344	41·1	1,266	38·7	1,039	31·7	1,063	32·5
Chetty	36,414	1,460	40·1	1,968	54·0	1,050	28·8	1,034	28·4
Vellalah or Mudaliar...	66,551	2,019	30·3	2,972	44·7	2,454	36·9	2,365	35·5
Balijah or Naidu ...	47,811	1,404	29·4	2,112	44·2	1,619	33·9	1,696	35·5
Vanniah or Naicker ...	50,209	2,236	44·5	2,887	57·5	2,508	50·0	2,202	43·9
Pariah	59,651	2,482	41·6	3,380	56·7	2,803	47·0	2,497	41·9
Patnavar	9,799	802	80·2	801	81·7	517	52·8	525	53·6
Yadaval or Idayar ...	14,308	986	68·9	1,426	99·7	623	43·5	557	38·9
Viswa Brahmin or Kammalar	15,626	680	43·5	990	63·4	648	41·5	588	38·3

TABLE E.

Table of Births, Deaths and Infantile Death-rates by months for 1919 and 1920.

Months.	1919. Total No. of Births.	1919. Birth-rate.	1919. Total No. of Deaths.	1919. Death-rates.	1919. Infantile Death.	1919. Infantile Death rates on 1000 Live Births.	1920. Total No. of Births.	1920. Birth-rates.	1920. Total No. of Deaths.	1920. Death-rates.	1920. Infantile Death.	1920. Infantile Death rates on 1000 live births.
January ...	1,494	34·6	3,780	87·5	722	483·3	1709	39·5	2,254	52·1	570	333·5
February ...	1,299	30·4	2,293	53·1	536	412·6	1403	32·5	1,863	43·1	491	350·0
March ...	1,537	35·6	2,014	46·6	473	307·7	1586	36·7	1,928	44·6	437	275·5
April ..	1,308	30·2	1,768	40·9	448	342·5	1538	35·6	1,629	37·7	369	239·9
May ...	1,542	35·7	2,028	46·9	412	267·2	1711	39·6	1,616	37·4	454	265·3
June ...	1,365	31·6	1,841	42·6	404	296·0	1715	39·7	1,518	35·1	419	244·3
July ...	1,321	30·6	2,376	55·0	523	395·9	1953	45·2	1,471	34·0	432	221·2
August ...	1,624	37·5	2,575	59·6	515	317·1	2028	46·9	1,514	35·0	465	229·3
September ...	1,837	42·5	1,768	40.9	421	229·2	2063	47·7	1,511	34·9	457	221·5
October ...	1,954	45·2	1,885	43·6	487	249·2	2027	46·9	1,662	38·4	517	255·1
November ...	1,839	42·5	2,306	55·2	642	349·1	1912	44·2	2,066	47·8	686	358·8
December ..	1,816	42·0	2,553	59·2	647	356·3	1751	40·5	2,386	55·2	679	387·7
Total ...	18,936	36·5	27,187	152·4	6,230	329·0	21,396	41·3	21,418	41·3	5,976	279·3

TABLE F.

Ratio of deaths among children under one year per 1,000 live births registered in each Division during the year 1920.

Municipal Divisions.	Ratio of Deaths 1920.	Municipal Divisions.	Ratio of Deaths 1921.
1	328·5	16	211·7
2	277·7	17	262·3
3	277·7	18	248·6
4	260·4	19	233·0
5	414·4	20	233·5
6	312·5	21	260·9
7	314·6	22	234·3
8	405·8	23	278·5
9	327·1	24	249·6
10	349·6	25	272·7
11	508·4	26	232·3
12	333·9	27	260·0
13	363·5	28	280·7
14	500·0	29	240·1
15	333·9	30	293·8
		Total ...	2793

TABLE G

Table of Infantile Mortality by months in the year 1920.

Months.	Small-pox.	Measles.	Malaria.	Other Fever.	Diarrhoea and Dysentery.	Premature Births.	Debility.	Nervous System.	Respiratory System.	All other causes.	Total. Males.	Total. Females.	Total. Total.	Total of all causes for 1919.
January	4	...	2	9	116	105	52	136	76	70	324	246	570	722
February ...	1	2	1	12	111	77	35	107	76	69	265	226	491	536
March	1	...	1	9	91	79	32	88	106	30	221	216	437	473
April	2	2	1	8	86	70	23	83	72	22	196	173	369	448
May	7	2	...	10	118	73	37	95	84	28	239	215	454	412
June	2	....	1	19	86	62	36	70	87	56	229	190	419	404
July	...	1	1	11	120	61	33	88	85	32	222	210	432	523
August	1	...	3	8	93	75	53	79	83	70	229	236	465	515
September ...	1	....	...	7	90	107	49	89	83	31	235	222	457	421
October	...	...	2	14	80	100	36	122	103	60	272	245	517	487
November ...	...	1	...	15	137	105	70	150	136	72	362	324	686	642
December ...	1	...	1	20	132	118	49	146	130	82	379	300	679	647
Total ...	20	8	13	142	1,260	1,032	505	1,253	1,121	622	3,173	2,803	5,976	6,230

TABLE H

Table of Percentages of Infant Deaths from Principal causes in the year 1920.

Age periods.	Small-pox.		Measles.		Mala-ria.		Other Fever.		Diarrhoea and Dysentery.		Premature Births.		Debility.		Nervous System.		Respiratory System.		All other Causes.		Total.	
	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.	Total.	Ratio.
Under 7 days. ...	...	...	...	...	...	...	...	...	7	0·46	854	5·56	211	1·37	178	1·16	54	3·52	232	1·51	1536	25·70
7 days and under 1 month.	1	0·12	...	...	2	0.24	9	1·07	54	6·39	150	17·75	102	12·07	343	40·59	55	6·51	129	15·27	845	14·14
1 month & under 4 months.	1	0·08	1	0·08	...	...	35	2·81	302	24·26	24	1·93	116	9·32	401	32·21	267	21·45	98	7·87	1245	20·83
4 months & under 7 months.	3	0·31	5	0.52	3	0·31	45	4·67	337	34·99	2	0·21	29	3·01	181	18·80	302	31·36	56	5·82	963	16·11
7 months & under 10 months	9	1·04		...	2	0.23	35	4·03	341	39·24	2	0·23	37	4·26	95	10·93	266	30·61	82	9·44	869	14·54
10 months & under 1 year ...	6	1·16	2	0.39	6	1·16	18	3·48	219	42·28	...	...	10	1·9	55	10·62	177	34·17	25	4·83	518	8·67
Total. ...	20	0·33	8	0·13	13	0·22	142	2·38	1260	21·08	1032	17·27	505	8·45	1253	20·97	1121	18·76	622	10·41	5976	279·3

Vaccination Statement I—showing the number of Births verified during the Calendar year 1920 and the number of vaccination of infants under one year of age.

Municipal Divisions,	Total births excluding still births.	Still births.	Deaths under one year.	Number of infants surviving.	Number of infants Vaccinated under one year among Madras Births.	Percentage of Vaccination to births registred
1	2	3	4	5	6	7
1	596	7	126	470	223	37·4
	260	**16**	**40**	**220**	**120**	**46·2**
2	542	7	87	456	260	46·0
	274	**34**	**36**	**238**	**145**	**53·2**
3	816	25	180	636	387	42·5
	223	**25**	**28**	**195**	**60**	**26·9**
4	537	23	103	434	243	45·3
	127	**10**	**20**	**107**	**35**	**27·5**
5	212	...	60	152	48	26·6
	41	...	**5**	**36**	**6**	**14·6**
6	248	1	72	176	73	29·5
	58	...	**6**	**52**	**9**	**15·4**
7	290	2	71	219	101	34·8
	155	**6**	**15**	**140**	**26**	**16·8**
8	92	3	41	51	32	34·8
	38	**5**	**13**	**25**	**4**	**10·5**
9	512	15	117	395	175	34·2
	199	**17**	**14**	**8 5**	**46**	**23·1**
10	469	16	119	350	177	37·7
	189	**15**	**21**	**168**	**61**	**32·2**
11	115	6	45	70	36	31·3
	14	**2**	**2**	**12**	**3**	**21·4**
12	566	12	146	420	307	54·2
	99	**12**	**17**	**82**	**37**	**37·4**
13	480	17	119	361	258	53·8
	91	**7**	**19**	**72**	**19**	**20·9**
14	53	10	11	42	23	43·4
	13	**1**	**1**	**12**	**3**	**23·0**
15	476	21	137	339	184	38·7
	93	**15**	**12**	**81**	**24**	**25·8**
16	953	120	160	793	694	72·8
	197	**6**	**32**	**159**	**148**	**75·3**
17	823	30	200	623	495	60·1
	146	**11**	**34**	**11 2**	**49**	**33·5**
18	724	60	121	603	457	63·1
	84	**2**	**7**	**83**	**73**	**86,1**
19	511	19	142	369	320	62·6
	273	**6**	**33**	**240**	**143**	**52·4**
20	535	19	102	433	310	58·1
	570	**58**	**56**	**514**	**159**	**27·9**
21	414	14	91	323	224	54·1
	164	**10**	**33**	**131**	**49**	**29·8**
22	390	8	65	325	175	44·9
	243	**2**	**16**	**227**	**44**	**18·1**
23	834	39	211	623	436	52·3
	333	**16**	**75**	**258**	**107**	**80·4**
24	978	26	158	820	403	41·2
	171	**8**	**17**	**154**	**25**	**14·6**
25	443	18	77	366	241	54·4
	161	**15**	**16**	**145**	**33**	**20·4**
26	524	18	85	439	251	47·9
	64	**7**	**12**	**52**	**15**	**24·4**
27	642	32	133	509	272	42·3
	1'5	**6**	**15**	**100**	**24**	**20·9**
28	697	32	104	593	482	69·2
	120	**11**	**25**	**95**	**56**	**46·6**
29	564	44	102	462	302	53·5
	219	**17**	**39**	**180**	**99**	**45·2**
30	449	26	99	400	291	58·3
	100	**8**	**20**	**80**	**40**	**40·0**
	15,536	670	3,284	12,252	7,881	50·7
	4834	**368**	**679**	**4,155**	**1,662**	**34·4**

N. B.—The antique figures denote Hospital births

Vaccination Statement II. showing the number of Births verified in 1920 and the number of infants Vaccinated under one year of age.

Year.	Total number of births excluding still-births.	Number of children in column 2 who died before attaining the age of one year without being vaccinated.	Number of children in column 2 who left the city before attaining the age of one year without being vaccinated.	Number of children in column 2 who were available for vaccination. (column 2 *minus* 3 and 4).	Number of children in column 5 who were vaccinated before they attained the age of one year.	Percentage of column 6 to column 5.	Number of children in column 5, whose vaccination was postponed beyond one year of age for medical reasons.
1	2	3	4	5	6	7	8
1918	17,065	4,363	3,069	9,633	8,332	86·49	61
1918	**4,277**	**602**	**988**	**2,687**	**1,382**	**51·43**	**32**
1919	15,016	3,791	2,520	8,705	7,489	86·03	182
1919	**4,199**	**664**	**845**	**2,690**	**1,385**	**51·84**	**9**
1920	15,536	3 284	3,018	9,234	7,881	85·35	136
1920	**4,834**	**679**	**948**	**3,207**	**1,662**	**51·82**	**11**

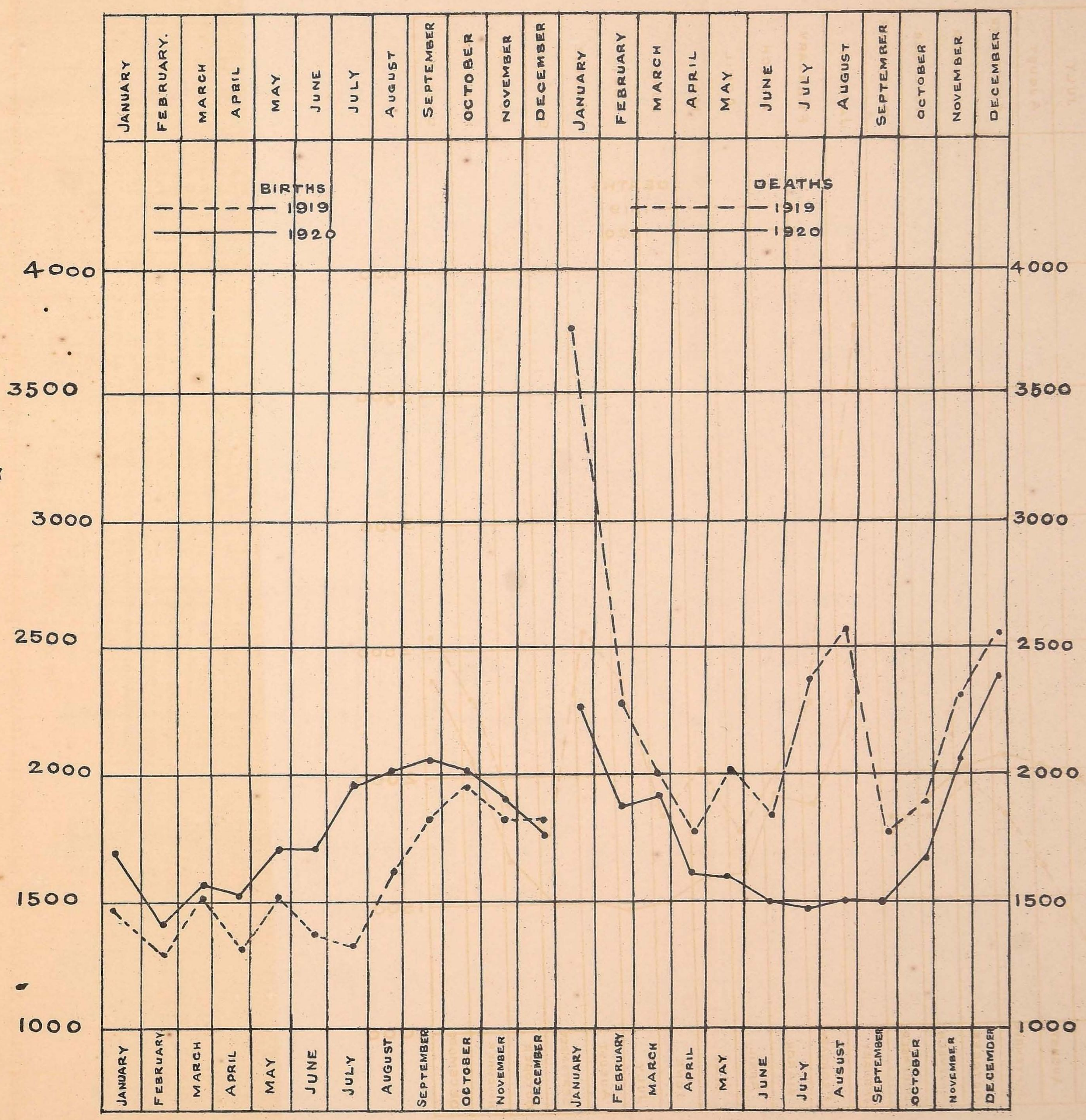
N. B.—The antique figures denote Hospital births.

Vaccination Statement No. III —Showing particulars of Vaccination during the Calendar year 1920.

New Municipal Divisions.	Districts.	Population.	Number of depots in each division.	Number of Vaccinators in each division.	Total No. of persons Vaccinated. Males.	Total No. of persons Vaccinated. Females.	Total No. of persons Vaccinated. Total.	Average No. of persons vaccinated by each Vaccinator.	Primary vaccination. Total. Males.	Primary vaccination. Total. Females.	Primary vaccination. Total. Total.	Primary vaccination. Successful. Under one year.	Primary vaccination. Successful. One year and under six.	Primary vaccination. Successful. Six years and above.	Primary vaccination. Successful. Total.	Primary vaccination. Unknown.	Re-Vaccination Total.	Re-Vaccination Successful.	Re-Vaccination Unknown.	Percentage of successful cases in which the results were known. Primary.	Percentage of successful cases in which the results were known. Re-vaccination	Persons successfully vaccinated per 1000 of Population	Average annual No. of persons successfully Vaccinated during the previous 5 years. Number.	Average annual No. of persons successfully Vaccinated during the previous 5 years. Ratio per 1000 of Population.	Average annual No. of deaths from small-pox during the previous 5 years. Number.	Average annual No. of deaths from small-pox during the previous 5 years. Ratio per 1000 of Population.	Average cost of each successful Vaccination.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	Royapuram ...	Not available			392	283	675		272	221	493	331	41	...	372	50	182	71	30	83 9	46·7	Not available.	Not available.	Not available.	Not available.	Not available.	Rs. 1-3-7.
2	Tondiarpet ...				790	548	1,338		476	462	938	564	106	...	670	98	400	158	87	79·8	50·5						
3	Washermenpet ...				621	478	1 099		415	407	822	488	99	6	593	4	277	58	158	72·5	48·7						
4	Korukupet ...				365	227	592		251	211	462	265	63	3	331	12	130	20	90	73·6	50·0						
5	Harbour ...				218	136	354		149	116	265	188	9	...	197	28	89	19	33	83·2	33.9						
6	Muthialpet ...				329	150	479		114	99	213	138	11	...	149	7	266	26	67	72·3	13·1						
7	Kachalesvaranpet ...				338	179	517		165	118	283	201	10	...	211	6	234	13	46	76·2	6·9						
8	Kothaval Bazaar ...				246	246	492		220	230	450	247	140	...	387	4	42	20	3	86·8	51·3						
9	Ammen Koil ...				552	205	757		238	169	407	238	30	...	268	48	350	36	223	74·7	28·3						
10	Seven Wells ...				688	235	923		220	161	381	244	14	...	258	53	542	46	401	78·7	32 6						
11	Sowcarpet ...				161	137	298		99	120	219	127	62	...	189	1	79	20	14	86·7	30·8						
12	Peddunaickenpet ...				513	315	828		297	274	571	340	41	1	382	16	257	18	97	68·8	11 3						
13	Trevelyan Basin ...				484	318	802		251	223	474	278	24	...	302	17	328	28	126	66·1	13·8						
14	Esplanade ...				153	62	215		65	47	112	62	18	...	80	3	103	13	73	73·4	43·3						
15	Park Town ...				581	446	1,027		359	424	783	499	81	...	580	17	244	20	177	75 7	11.9						
16	Perambur ...				1913	386	2,299		435	377	812	651	5	...	656	9	1,487	222	162	70·9	16·8						
17	Chulai ...				499	402	901		369	370	739	491	20	...	511	24	162	19	83	71.5	24·1						
18	Purasawakam ...				625	297	922		313	256	569	441	3	...	444	9	353	49	52	79·3	16·3						
19	Vepery ...				556	410	966		419	376	795	510	32	...	542	25	171	54	31	70·4	38·6						
20	Egmore ...				512	365	877		373	345	718	473	19	...	492	22	159	32	22	70.7	23·3						
21	Kilpauk ...				411	468	879		239	284	523	344	20	...	364	33	356	141	14	75·3	41·2						
22	Nungambakkam ...				422	212	634		271	196	467	332	62	...	394	21	167	29	125	88·3	69·0						
23	Chintadripet ...				625	435	1,060		367	320	687	501	14	2	517	23	373	42	247	77 8	33·3						
24	Tiruvatesvarnpet ...				370	288	658		258	279	537	327	4	...	331	96	294	16	241	76·8	30·2						
25	Chepauk ...				389	282	671		324	271	595	355	39	...	394	62	76	22	29	73·9	62·9						
26	Triplicane ...				348	337	685		260	284	544	300	64	1	365	49	141	39	56	73·7	45 9						
27	Amir Mahal ...				466	282	748		259	248	507	369	49	...	418	24	68	19	20	86·5	39·6						
28	Mirsahibpet ...				593	344	936		397	335	732	512	195	...	707	8	205	185	1	97·6	90·7						
29	Royapettah ...				539	446	985		417	408	825	537	153	...	690	74	160	60	44	91 9	51·7						
30	Mylapore ...				385	269	654		311	266	577	439	120	...	559	10	77	64	2	98·6	85·3						
	Total ...	518660	15	15	15,084	9,188	24,272	1618	8,603	7,897	16,500	10,792	1,548	13	12,353	853	7,772	1,559	2,754	78·9	31·1						

Madras: Printed by S. Murthy & Co., at the "Kapalee Press."

GRAPH SHOWING BIRTHS & DEATHS BY MONTHS

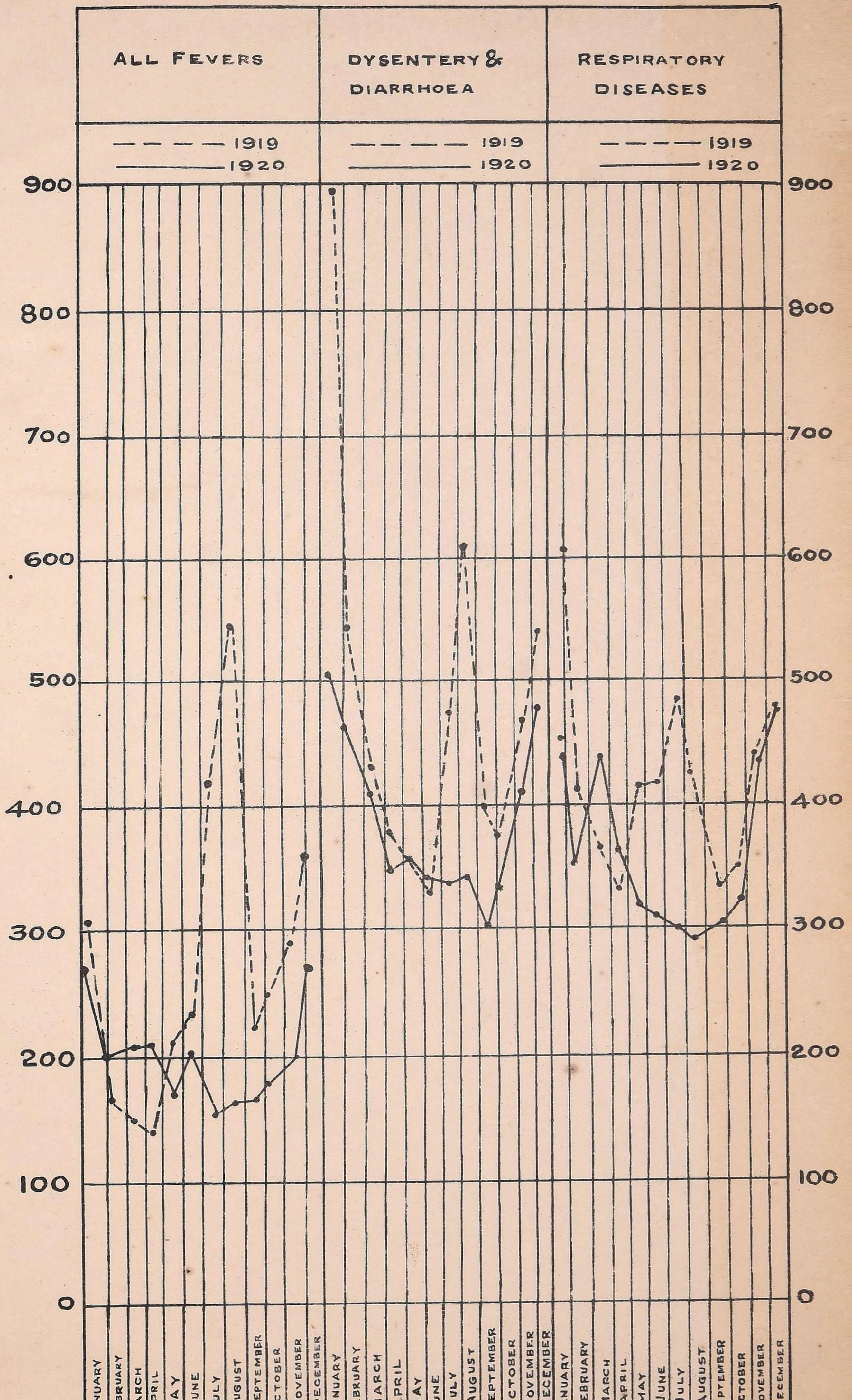


Reg. No. 1268
Copies 500

Vandyke., Survey Office, Madras.
1921.

Note.—Reproduced from the original received from the Health Officer, Corporation of Madras.

GRAPH SHOWING THE TOTAL DEATHS
BY MONTHS
FROM



Reg. No. 1267
Copies 500

Vandyke., Survey Office, Madras.
1921.

Note.—Reproduced from the original received from the Health Officer, Corporation of Madras.

THE VENKATARAMANA DISPENSARY MYLAPORE MADRAS.

During the year 1918-19, the total number of patients treated at the Venkataramana dispensary was 24,545 including minor surgical cases. The total attendance was 61,194 or an average of 168 daily as against an average of 183 in 1917-18 and 164 in 1916-17. All classes of the population receive medical aid freely at this dispensary. The minor surgical department continues to be useful.

The usual contribution of Rs. 100, from the Corporation of Madras was not received during the year. Payment of the same has been sanctioned since the close of the year.

VENKATARAMANA DISPENSARY,
MYLAPORE,
MADRAS, 1*st May* 1918.

A. KRISHNASWAMY IYER,
Secretary, Venkataramana dispensary,
Mylapore, Madras.

ST. THOMAS' CONVENT DISPENSARY,
24*th March* 1919.

From

THE LADY SUPERIOR,
St., Thomas Convent, dispensary,
San Thome Madras.

To

THE PRESIDENT,
Corporation of Madras,
MADRAS.

SIR,

I have the honour to send you the annual report of 1918. The dispensary continues still its beneficent work of lessening the sufferings of the poorer classes of Eurasians, Hindus and Muhammadans. Specially this year, during the time of Influenza and Pneumonia, the institution tried very earnestly to help the poor people of Mylapore.

Every year, some improvements are made; and two doctors give charitably their advice.

The dispensary is open daily except on Sundays, from 8 A.M., to 10-30A.M., and from 5 P.M. to 6-30 P.M.

In-door patients are about 300 children of different schools and a boarding house, two orphanages, and an asylum for old women.

The out-door patients consist of all classes.

The convent bears the expenses, with the small help of Rs. 20 per mensem given by the Corporation of Madras. Trusting that you will give the work your favourable consideration, and increase the help for the benefit of the needy and the poor.

I have the honour to be,
Sir,
Your most obedient servant,
MARIEDE F. JULES,
for *the Lady Superior.*

MADRAS,
19*th May* 1919.

From

M.R.RY. G. A. NATESAN AVARGAL,
Honorary Secretary to the Governors of
Victoria Caste and Gosha Hospital.

To

THE PRESIDENT,
Corporation of Madras,
Ripon Buildings.

SIR,

I have the honour to submit the report of the working of the Victoria Caste and Gosha hospital during the year 1918.

The total number of patients treated during the year under report was 16,840 as compared with 15,496 treated during the previous year. The number of in-patients treated was 2,564 against 2,400 of the previous year and the number of out-patients was 14,276 against 13,096 of the year before, thus showing an increase in the numbers treated in both in-patients and out-patient departments.

There were 679 midwifery cases admitted during the year 1918, while the number of cases treated during 1917 was 792. The marked fall in the number treated in 1918 is due to the fact that a large number of cases among the poorer people is treated out of hospital free of charge by the trained midwives employed by the Corporation of Madras in connection with the "Child welfare scheme" recently inaugurated.

Of the 679 labour cases treated, 317 were natural, 113 were difficult and 176 complex, the former requiring instrumental delivery and the latter surgical interference of some kind.

The number of Hindus and Muhammadans treated during the year is:—

		In-patients.	*Out-patients.*
Hindus ...	...	1,636	10,602
Muhammadans	...	919	3,674
Others	...	9	...

The number of available beds is 82. Three beds in the delivery ward are not included in this number.

Endowments and donations.

During the year twentyseven beds were supported by the following ladies and gentlemen :—

					No.
1.	Mrs. Annie Besant...	...	...	...	1
2.	The Hon'ble Major-General G.G. Gifford, C.S.I.			...	1
3.	The Hon'ble Mr. T. Rangachariar		...	...	1
4.	The Hon'ble Sir. Gordon Fraser		...	...	1